RATGAUZ, L.G.; DANILOV, A.I.

Work of the division of hygiene, microbiology and epidemiology of the Academy of Medical Sciences of the U.S.S.R. (February 1960 - February 1961). Vest. AMN SSSR 16 no.7:72-81 '61. (MIRA 14:7)
(PUBLIC HEALTH) (MICROBIOLOGY) (EPIDEMIOLOGY)

FELDYSH, M.V., akademik; F[illegible], Ye.[illegible], akademik; [illegible], L.[illegible], akademik; SIS[illegible]YAN, [illegible], akademik; [illegible]; [illegible]; FOK, V.A.; LANDAU, L.D.; LIFSHITS, Ye.M.; [illegible]; [illegible]V, [illegible]; [illegible], A.Ye.; V[illegible], L.A.; [illegible], akademik; SATTAYEV, [illegible].I., akademik; [illegible], akademik; [illegible]VICH, V.F.; [illegible]ISHVILI, [illegible], akademik; [illegible]YEV, [illegible]; [illegible], T.R.; MASEVICH, [illegible].G., doktor fiz.-matem.nauk; [illegible]; [illegible], [illegible].Ya., prof.; S[illegible]R'YEV, [illegible], akademik; [illegible]V, [illegible], prof.; [illegible], A.G., prof.; [illegible]DOVA, L.G., prof.; FETV[illegible], Ya.V.; SEMIN[illegible]V, [illegible], prof.; [illegible], [illegible].G.; RYC[illegible]V, [illegible]; [illegible]; VIA[illegible]; BARAN[illegible]V, [illegible]Ye.[illegible]; [illegible], L.A.; [illegible]; IL'[illegible], Yu.[illegible]; DANILOV, A.I., prof.; [illegible], [illegible]; [illegible]YEVA, [illegible], prof.; [illegible], L., doktor; SZA[illegible], Ladislav, akademik; [illegible], Yozef; [illegible]V'YEV; [illegible]SON, M.S., prof. (L'vov); [illegible]V, [illegible]; [illegible]VICH, Yu.; VOSI[illegible]SKIY, V.; KR[illegible]YEV, A.; [illegible]Y, D., prof., (L'vov); KONDRA[illegible]YEV, V.N., akademik; [illegible]SKIY, V.[illegible], kand.geol.-miner.nauk; YANSHIN, A.L., akademik

"Priroda" is 50 years old. Priroda [illegible] no.[illegible] [illegible]

(MIRA [illegible])

1. Prezident AN SSSR (for Keldysh). 2. Glavnyy [illegible] sekretar' Prezidiuma AN SSSR (for Fedorov). 3. Akademik-sekretar' Otdeleniya fiziko-matem.nauk AN SSSR (for Artsimovich). [illegible]. Akademik-sekretar' Otdeleniya biologicheskikh nauk AN SSSR (for Sisakyan). [illegible]. Chlen-korrespondent AN SSSR, zamestitel' akademika-sekretarya Otdeleniya

(Continued on next card)

DANILOV, A.I.; CHERVONSKIY, V.I.; NOSIK, N.N.

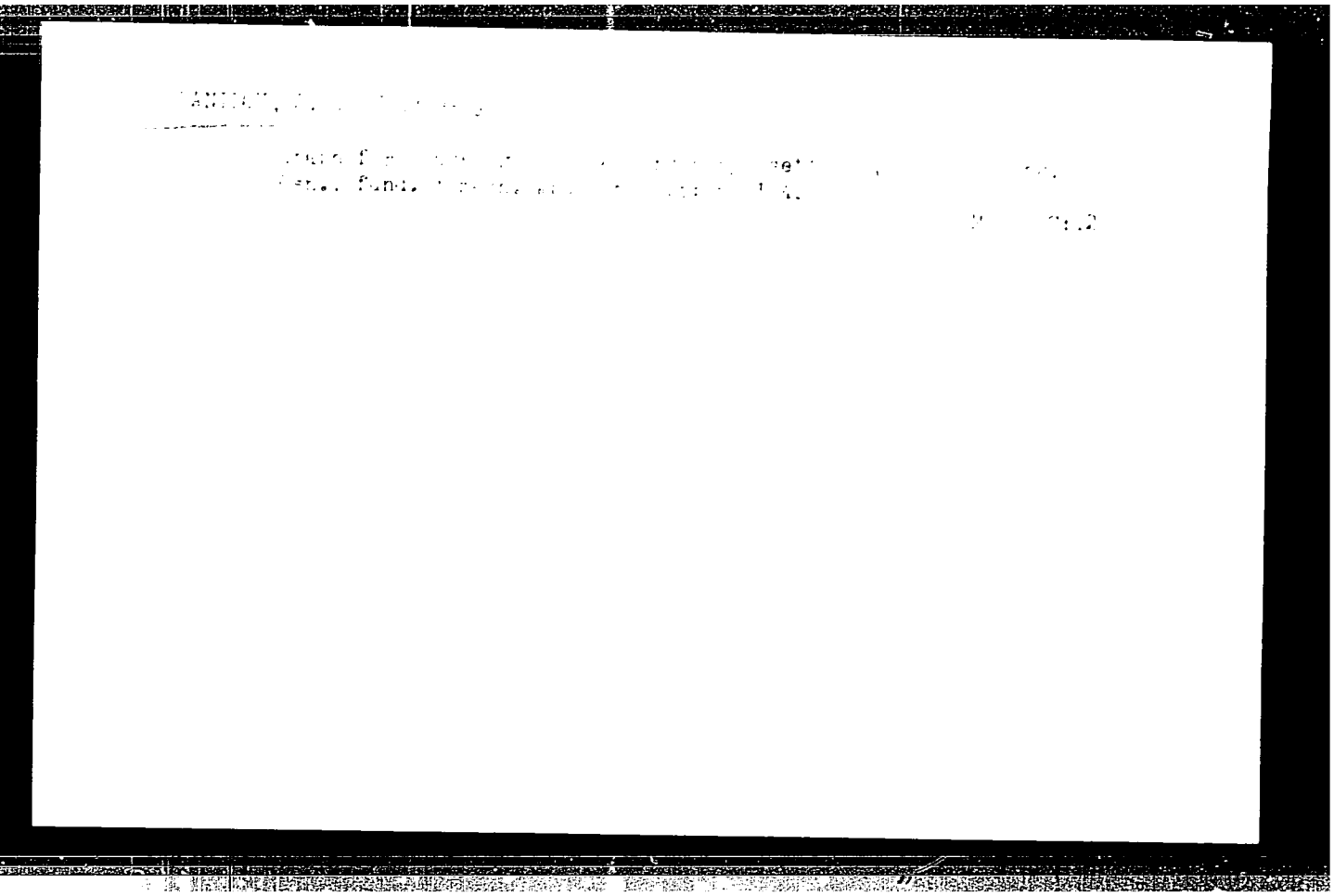
Debate. Vest. AMN SSSR 18 no.6:40 '63.

Debate. Ibid.:67 (MIRA 17:1)

DANILOV, A.I.

Results of [illegible] epidemiology and [illegible] attitudes of the [illegible] demiology of [illegible] West. AMN SSSR [illegible] U.S.S.R. (MIRA [illegible])

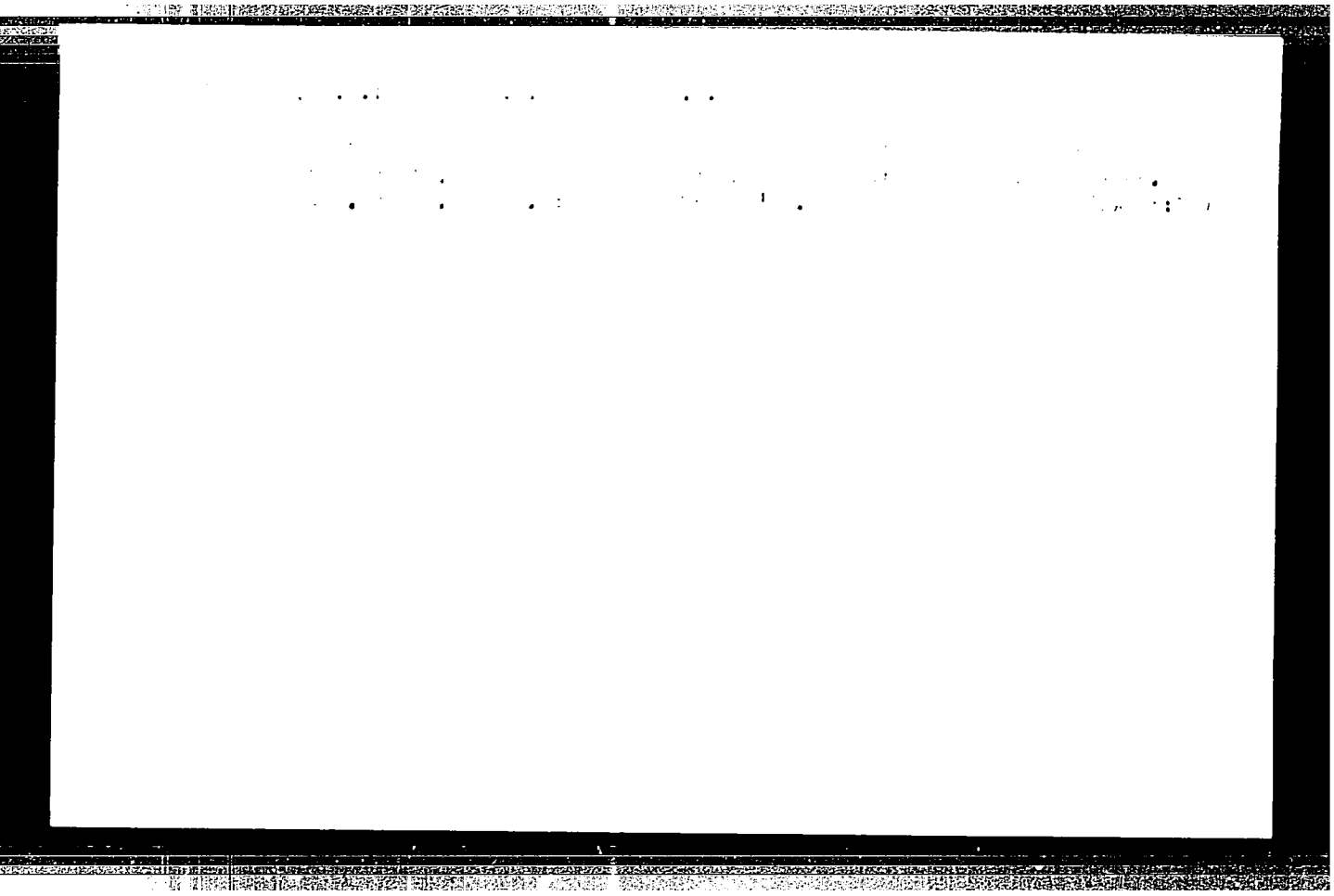
Ornith[illegible]



DANILOV, A.I.

Nomograms for calculating the coefficient of porosity $\mathcal{E}$, porosity n, the degree of moisture G according to specific gravity γ, the volumetric weight of soil skeleton γ_{sk}, and soil moisture . Osn., fund. i mekh. grun. 7 no.4:27-28 '65.

(MIRA 18:8)



TERSKIKH, I.I.; BYCHKOVA, Ye.N.; DANILOV, A.I.; GROMYKO, A.I.; EFKLESHOVA, A.Yu.

Aerosol vaccination against tick-borne encephalitis. Vop. virus. 10 no.3:359-360 My-Je '65. (MIRA 18:7)

1. Institut virusologii imeni Ivanovskogo AMN SSSR, Moskva.

L 21019-66 EWT(1)/T 30/JK

ACCESSION NR: AP5017435 UR/0248/65/000/007/0047/0055
615.371/.372-014.171-032:611.2

AUTHOR: Terskikh, I. I. (Moscow); Danilov, A. I. (Moscow); Gromyko, A. I. (Moscow)

TITLE: Aerosol immunization with liquid vaccines 12 11 B

SOURCE: AMN SSSR. Vestnik, no. 7, 1965, 47-55

TOPIC TAGS: aerosol, immunization, immunology, vaccine, aerosol chemistry, infective disease

ABSTRACT: The article largely represents a survey of aerosol immunization literature and includes some experimental data of the authors. In studying aerosol immunization in man and animal the specific anatomic features of respiratory organs should be taken into consideration. In man the nasal air passages, from the nasal area to the bronchial tree, with the aid of the mucous-ciliated epithelium prevent most particles larger than 5 to 10 microns in diameter from reaching the lung tissue. In rodents (white mice, white rats, and rabbits) the nasal conchae are extremely well developed with complex curvatures of the bone that completely prevent entry of any large particles. The terminal and respiratory bronchioles

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L 21019-66

ACCESSION NR: AP5017435

in man and animals differ in lumen diameters. Anatomically the respiratory organs of man most closely resemble those of monkeys and dogs. Penetration of aerosol particles with a 1 micron diameter into lung tissue is practically the same for man and animals. In aerosol immunization, particles (1 to 3 microns in diameter) penetrate deep into the lungs to the terminal and respiratory bronchioles. Then, by diffusion and phagocytosis and with the help of wandering cells, the aerosol particles reach the lymph vessels and lymph nodes and also the blood stream, thereby ensuring the participation of the entire lymphoid and reticuloendothelial systems in immunogenesis. Also, at the same time relatively small amounts of antigen are diffusely distributed over a large area of the alveolar epithelium and over lymph node and spleen areas. Thus, with high dispersion of particles, aerosol immunization may also be highly effective against infections other than respiratory. The authors in their aerosol immunization experiments used inactivated cultural tissue vaccines against tick-borne encephalitis and ornithosis. Formulas for calculation of particle dispersity and concentration in an aerosol mist in relation to time are given to determine more accurately the amount of antigen reaching the respiratory organs. Dispersity and

Card 2/3

L 21019-66

ACCESSION NR: AP5017435

concentration of liquid aerosols have been successfully determined with the use of a VDK type ultramicroscope. Orig. art. has: 4 tables and 5 figures.

ASSOCIATION: Institut virusologii im. D. I. Ivanovskogo AMN SSSR, Moscow (Virusology Institute AMN, SSSR)

SUBMITTED: 10May65 ENCL: 00 SUB CODE: LS

NR REF SOV: 019 OTHER: 030

Card 3/3 BK

L 05866-67 EWT(1)/T JK

ACC NR: AP6024444 SOURCE CODE: UR/0016/66/000/007/0094/0097

AUTHOR: Gromyko, A. I.; Danilov, A. I.; Vlasenko, G. Ya. 21 B

ORG: Virology Institute im. Ivanovskiy, AMN SSSR (Institut virusologii)

TITLE: Determining the physical parameters of viral aerosols. Report II. Studying the condition of an aerosol cloud in the IVK-2 chamber and the significance of observed shifts for dosimetry of an infective agent by aerosol.

SOURCE: Zhurnal mikrobiologii, epidemiologii, i immunobiologii, no. 7, 1966, 94-97

TOPIC TAGS: aerosol, aerosol chamber, dosimetry, virus disease, aerosol infection/ IVK-2 chamber

ABSTRACT: The objectives of this study were: to determine the concentration of substances dispersed in aerosols; to establish the dependence of concentration on time; to clarify the fractional composition of aerosols; to calculate their gravimetric (weight) concentration; and to determine the quantity of aerosol entering the respiratory system of an animal during exposure. The greatest reduction in particle concentration in an aerosol occurs in approximately the first thirty minutes; however, between 30 min and 2 hr the concentration does not change significantly. Knowledge of the quantity of particles and their concentration by weight is necessary in determining the quantity of aerosol substance aspirated by an animal; it was previously established that an hour's exposure to aerosol was sufficient to produce infection,

Card 1/4 UDC: 616-022.1:576.858:615.417.9-011

but the shifts in aerosol concentration occurring during a given period were not considered. Weight concentration was determined by taking particle weight as equal to volume and using standard computational methods. Thus, knowing the weight concentra-

Table 1. Change in aerosol concentration after cessation of spraying

Time interval (min)	Number of aerosol particles (x10⁵) in 1 cm³				
	d	d	d	d	d
Background	0.01	0.07	—	—	0.04
1	7.75	8.22	7.2	—	7.7
5	7	6.2	8.8	—	7.3
10	6.8	7	5.6	6.2	6.4
15	5.2	5.2	5.6	5.2	5.3
20	6.2	5.6	6.9	5.2	6.1
25	4.4	5.2	3.4	3.8	4.2
30	5.2	4.8	5.2	5.2	5.1
35	3.6	3.8	3.8	4.1	3.8
40	3.8	4.1	4.1	4.4	4.1
45	3.8	3.6	3.8	—	3.7
60	3.3	3.2	3.6	3.6	3.4
75	3.4	3.6	3.3	3.4	3.4
90	3.4	3.3	3.4	3.6	3.4
105	2.9	3.2	3.4	2.8	3.1
120	2.6	2.3	3.4	3.2	2.9
After 24 hr	0.03	0.03	0.06	—	0.04

Table 2. Fractional Composition of aerosol after injection into chamber

Diameter of aerosol particles (in μ)	% age of particles after					
	5 min	10 min	20 min	30 min	45 min	60 min
0.9—1.1	4	12	10	6	8	20
1.5—1.7	80	80	85	90	84	70
2—3	10	6	3	4	8	10
3—4	6	2	2	—	—	—

Table 3. Quantity of various size in chamber at different time intervals

Time after injection (in min)	Number of particles ($\times 10^4$) in 1 cm^3 with radius (in μ)				Total number of particles in 1 cm^3 ($\times 10^4$)
	0.5	0.8	1.2	1.6	
5	2.92	58.4	7.3	4.38	73
10	7.68	51.2	3.84	1.28	64
20	6.1	51.85	1.83	1.22	61
30	3.06	45.9	2.04	—	51
45	2.96	31.08	2.96	—	37
60	6.8	23.8	3.4	—	31

Table 4. Gravimetric (weight) concentration of virus-containing material in an aerosol cloud at various intervals after injection into chamber

Total after injection (in min)	Gravimetric concentration (in mg/m^3 for particles of radius (in μ)				Total quantity of substance (in mg/m^3)
	0.5	0.8	1.2	1.6	
5	15.2	1226.4	518.3	749	2508.9
10	39.9	1075.2	272.6	218.9	1606.9
20	31.7	1088.8	129.9	208.6	1459
30	15.9	963.9	144.8	—	1124.6
45	15.4	652.7	210.2	—	878.3
60	35.4	500	241.4	—	776.8

tion and dispersion composition, the amount of material entering an animal's respiratory tract may be determined for any moment in the exposure period, using the formula $D = C \cdot V \cdot P \cdot t$ (C= concentration of aerosol substance in g/ml; V = respiratory volume of animal in ml/min; P = weight of animal in g; t = time of exposure of animal to aerosol). The following data were obtained on the amount of material aspirated by mice in differing time periods: 1 — 5 min - 0.1 mg of substance absorbed; 5—10 min - 0.06 mg; 10—20 min - 0.12 mg; 20—30 min - 0.009 mg; 30—45 min - 0.1 mg; 45—60 min - 0.09 mg. The methods currently used in determining the fractional composition of aerosols do not

L 05866-67
ACC NR: AP6024444

yield absolutely accurate results and the possibility of using photoelectric devices to automate the counting of aerosol particles is considered. Orig. art. has: 4 tables. [EL]

SUB CODE: 15, 06/ SUBM DATE: 21May65/ ORIG REF: 004/ OTH REF: 003/ ~~ATD PRESS~~

kh

Card 4/4

ACC NR: AP6032011 SOURCE CODE: UR/0243/66/000/009/0041/0044

AUTHOR: Danilov, A. I.; Pokhitonov, Yu. P.

ORG: Virology Institute im. D. I. Ivanovskiy, AMN SSSR, Moscow (Institut virusologii AMN SSSR)

TITLE: Equipment for determining size of aerosol particles in liquid dispersion

SOURCE: Meditsinskaya promyshlennost' SSSR, no. 9, 1966, 41-44

TOPIC TAGS: aerosol, medical laboratory equipment, microphotography, microscopy, microscope

ABSTRACT: Microscope attachments are described which are for use in sampling liquid aerosols and in their photoregistration, thus facilitating calibration of atomizers and investigation of the dispersion condition of an aerosol cloud in a chamber. A schematic (Fig. 1) presents the basic setup, and variations for other uses are suggested; a photograph shows the exterior of the microscope (see Fig. 2). Orig. art. has: 3 figures. [W.A. 50]

Card 1/3 UDC: 615.417.1-014.3

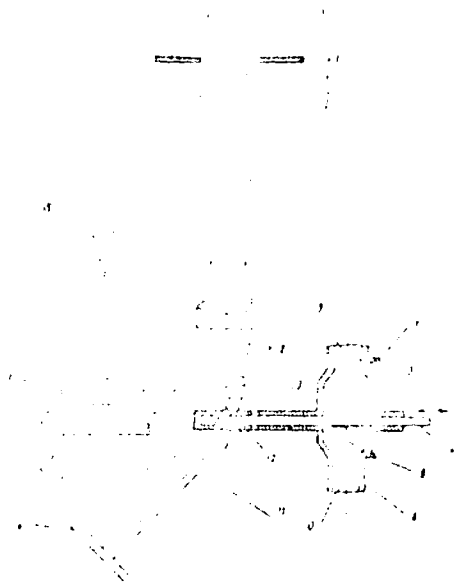


Fig. 1. Schematic of equipment for sampling, measuring, and photoregistering of aerosols

1 - [illegible]; 2 - [illegible] objective, 3 - [illegible]; 4 - sample plate; 5 - [illegible]; 6 - air suction tunnel; 7 - nozzle; 8 - [illegible]; 9 - aerosol-air feed channel; 10 - [illegible]; 11 - [illegible]; 12 - [illegible]; 13 - [illegible]; 14 - [illegible]; 15 - [illegible]; 16 - [illegible]; 17 - [illegible] diaphragm; 18 - [illegible]; 19 - incandescent [illegible].

ACC NR: AP6032021

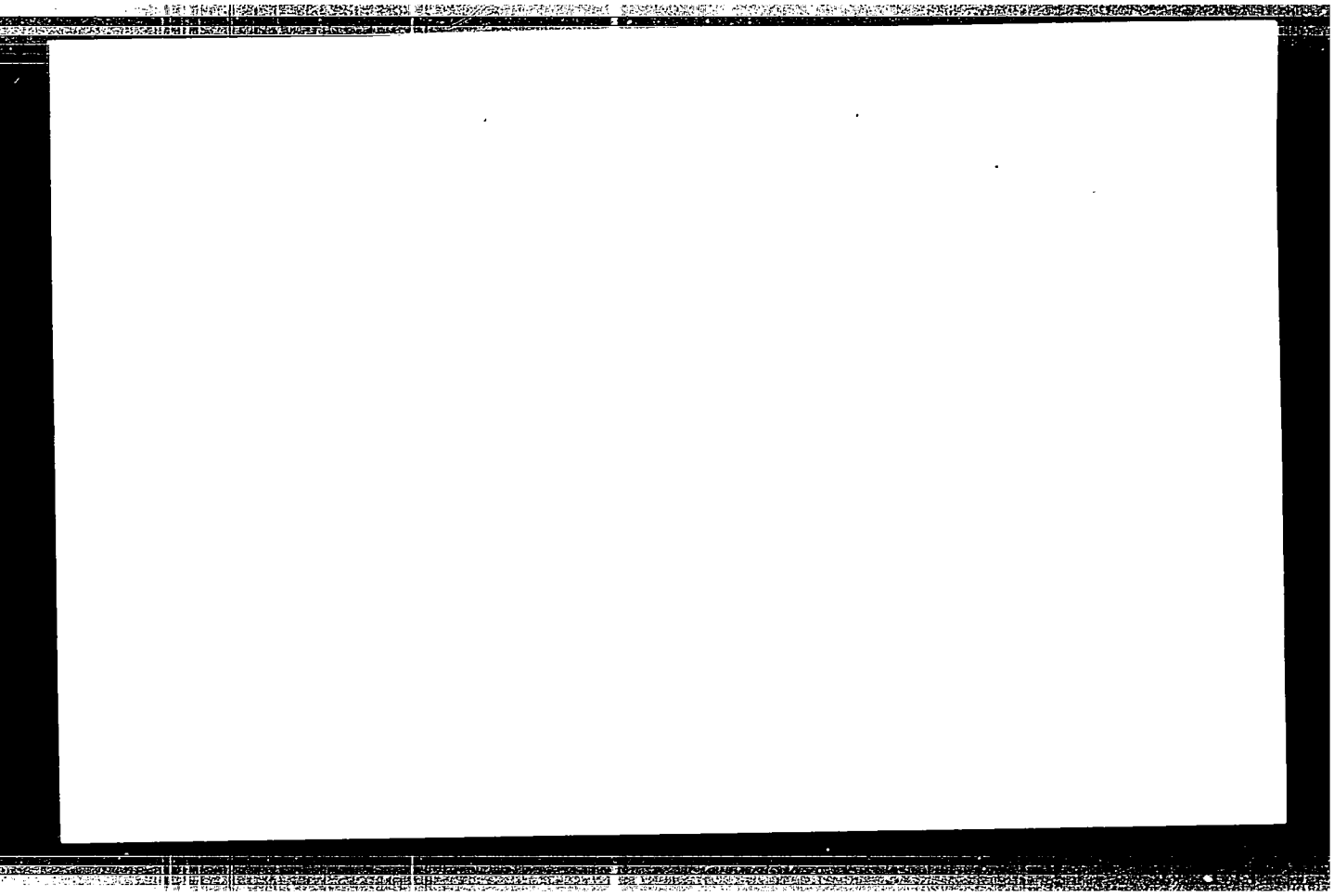
Card 3/3

PETROV, A.K.; SPERANSKIY, V.G.; KHIZHNICHENKO, A.M.; SHILYAYEV, B.A.; DANILOV, A.K.; BORODULIN, G.M.; ZAMOTAYEV, S.P.; MARKARYANTS, A.A.; SOLNTSEV, P.I.; SMIRNOV, Yu.D.; VAYNBERG, G.S.; OKOROKOV, N.V.; KOLOSOV, M.I.; SEL'KIN, G.S.; MEDOVAR, B.I.; LATASH, Yu.B.; YEFROYMOVICH, Yu.Ye.; VINOGRADOV, V.M.; SVEDE-SHVETS, N.N.; SKOROKHOD, S.D.; KATSEVICH, L.S.; SHTROMBERG, Ya.A.; MIKHAYLOV, O.A.; PATON, B.Ye.

Reports (brief annotations). Biul. TSNIICHM no.18/19:67-68 '57. (MIRA 11:4)

1. Zavod Dneprospetsstal' (for Speranskiy, Borodulin). 2. Chelyabinskiy metallurgicheskiy zavod (for Khizhnichenko). 3. Uralmashzavod (for Zamotayev). 4. Trest "Elektropech'" (for Vaynberg). 5. Moskovskiy institut stali (for Okorokov). 6. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Sel'kin, Svede-Shvets). 7. Institut elektrosvarki AN USSR (for Paton, Medovar, Latash). 8. TSentral'naya laboratoriya avtomatiki (for Yefroymovich, Vinogradov). 9. Gisogneupor (for Skorokhod). 10. Trest "Elektropech'" (for Katsevich). 11. Tbilisskiy nauchno-issledovatel'skiy institut okhrany truda Vsesoyuznogo tsentral'nogo soveta profsoyuzov (for Shtromberg).

(Steel--Metallurgy)



BERNSHTEYN, S.A., inzh.; DANILOV, A.M. inzh.; ZINOVA, A.N., inzh.

Use of rapid-hardening concrete in lining ventilation shafts at the "Chaykino-Glubokaya" mine No. 1. Shakht. stroi. no.5:25-26 '58. (MIRA 11:6)

(Shaft sinking) (Concrete)

KLEYN, A.L.; DANILOV, A.M.; Prinimali uchastiye: KOLYASNIKOV, M.P.; MISBAKHOV, A.K.; ANTROPOVA, N.G.; NESMEYANOV, Ye.V.; KHARITONOV, Yu.A.; TIMONINA, V.M.; LOPTEV, A.A.; TSIKAREV, V.G.

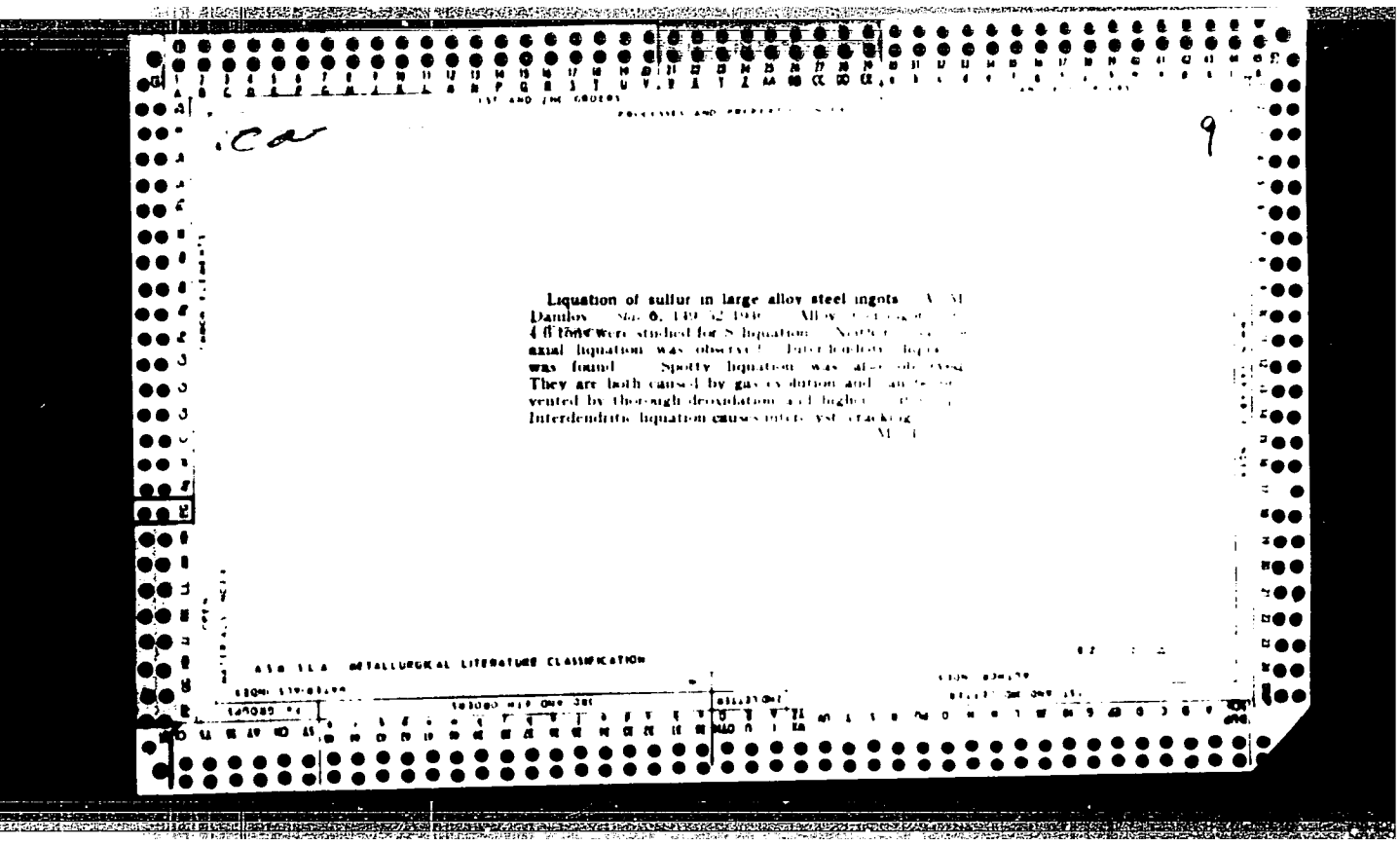
Accelerating the assimilation of lime during slag formation in basic open-hearth furnaces. Stal' 24 no.1:32-34 Ja '64. (MIRA 17:2)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov i Zlatoustovskiy metallurgicheskiy zavod (for Kleyn, Danilov).

ROZIN, B.B., inzh.; GEYFMAN, R.S., inzh.; DANILOV, A.M., inzh.; SLASHCHEVA, V.M., inzh.; GUREVICH, Yu.G., kand. tekhn. nauk

Statistical analysis of causes for changes in the impact toughness of 30KhGSA steel with the use of punched card computer machines. Stal' 24 no.1:74-77 Ja '64. (MIRA 17:2)

1. Zlatoustovskiy metallurgicheskiy zavod i Chelyabinskiy politekhnicheskiy institut.



Liquation of sulfur in large alloy steel ingots
Danilov Sta. 6, 139-52 1950 Alloy
4 [illegible] were studied for S liquation. Normal
axial liquation was observed. Interdendritic liquation
was found. Spotty liquation was also observed.
They are both caused by gas evolution and can be pre-
vented by thorough deoxidation and higher
Interdendritic liquation causes inter-ysl cracking.
M

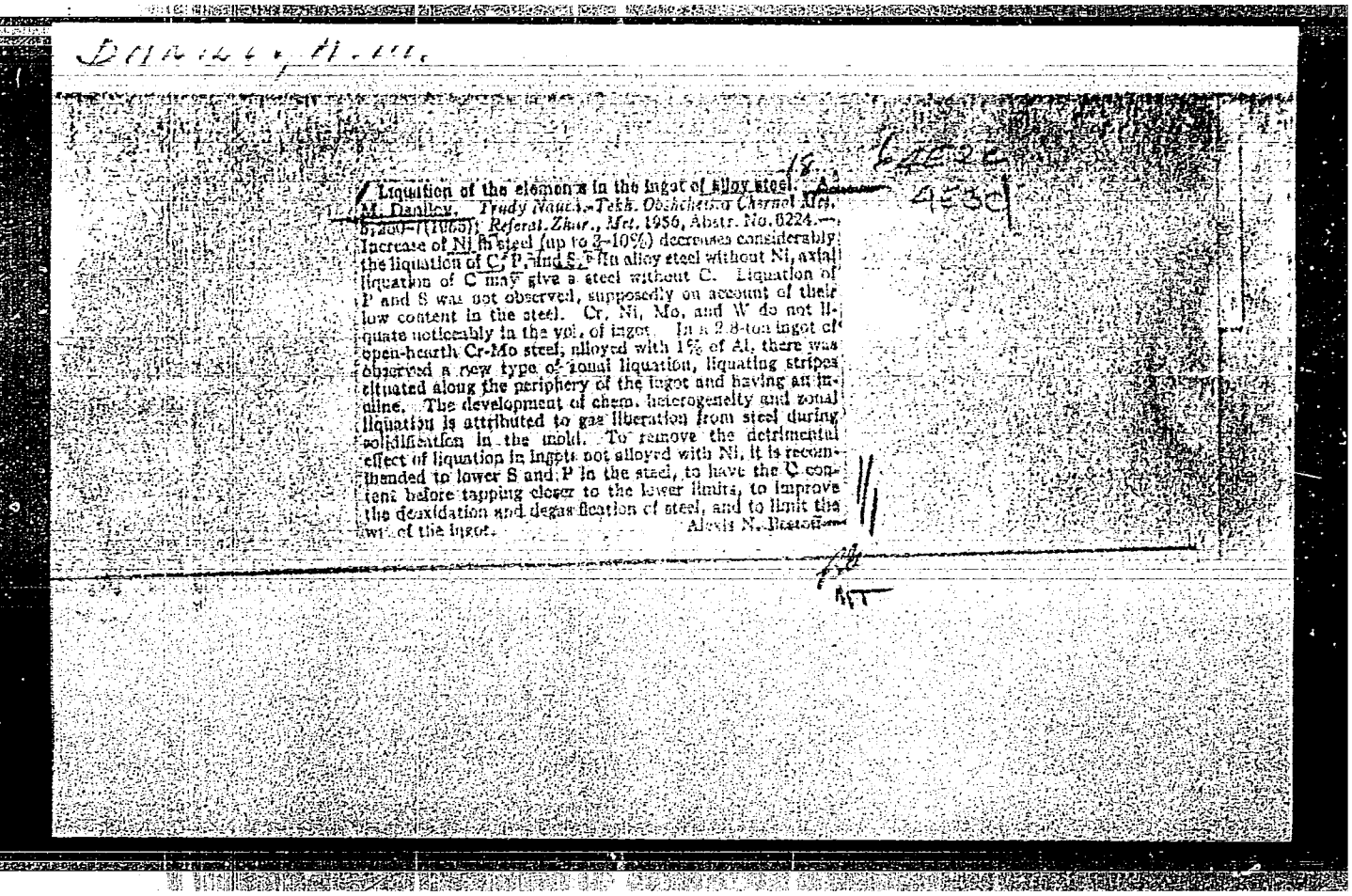
A58 VLA METALLURGICAL LITERATURE CLASSIFICATION

CA

7

Determination of nonmetallic inclusions in metal samples

A M Danilov and R D Mukhir (Zlatoustovskii Met Plant). *Zavodskaya Lab.* 15, 358 (1940). The inclusions were studied by means of polished sections. Diagram scales permitting detn. of the sizes of inclusions were worked out. Sulfide inclusions in samples of cast metal consisted of FeS and MnS. Usually considerable amts. of Fe oxides were dissolved in the inclusions. There were also complex inclusions of FeS-MnS and solid solns. of FeS in MnS. In cast samples the inclusions were globule disseminated in a continuous network along the boundary of the metal grain. D and M detd. nonmetallic inclusions in samples of metal taken according to the method of double fusion of C steel. The greatest contamination of nonmetallic inclusions in cast metal was observed after fusion and after the preliminary reduction and the least contamination was observed in samples taken during fusion. A chart showing the scale for detg. the size of inclusions is provided as are also photomicrographs showing sulfide and silicate inclusions in metals. A table gives the chem. compn. and type of inclusions present in metal samples. G. S. M.



Liquation of the elements in the ingot of alloy steel. A. M. Danilov. *Trudy Nauch.-Tekh. Obshchestva Chernoi Met.* 5, 240–7 (1955); *Referat. Zhur., Met.* 1956, Abstr. No. 6224.—Increase of Ni in steel (up to 8–10%) decreases considerably the liquation of C, P, and S. In alloy steel without Ni, axial liquation of C may give a steel without C. Liquation of P and S was not observed, supposedly on account of their low content in the steel. Cr, Ni, Mo, and W do not liquate noticeably in the vol. of ingot. In a 2.8-ton ingot of open-hearth Cr-Mo steel, alloyed with 1% of Al, there was observed a new type of zonal liquation, liquating stripes situated along the periphery of the ingot and having an incline. The development of chem. heterogeneity and zonal liquation is attributed to gas liberation from steel during solidification in the mold. To remove the detrimental effect of liquation in ingots not alloyed with Ni, it is recommended to lower S and P in the steel, to have the C content before tapping closer to the lower limits, to improve the deoxidation and degasification of steel, and to limit the wt. of the ingot.

Alexis N. Patton

AUTHOR: Danilov, A.M. (Engineer) 130 - 6 - 9/27

TITLE: Thin-walled ingot moulds for teeming killed steel. (Tonkostennye izlozhnitsy dlya razlivki spokoynoy stali).

PERIODICAL: "Metallurg" (Metallurgist), 1957, No.6, pp.19-20 (USSR).

ABSTRACT: After preliminary experiments at the Zlatoustovsk works had failed to show any effect of mould wall thickness on the crystalline structures of open-hearth killed alloy steel, a new type of big end up ingot mould was adopted. This has a uniform wall thickness of 100 mm instead of 90 to 170 in the ordinary moulds, weighs 3.8 instead of 4.9 tons for an ingot plus head weight of 4.6 tons. The average life of new type ingot moulds is 44.8 fillings instead of 40.5 and its adoption has led to a 23.8% reduction in ingot consumption per ton of steel. Results of full-scale tests on 213 heats teemed in the new moulds and 257 in old moulds have shown the shrinkage, central and general porosity and macro-structural defects to be independent of the mould type.

There is 1 Figure and 1 Table.

ASSOCIATION: Zlatoustovsk Metallurgical Works. (Zlatoustovskiy Metallurgicheskiy Zavod).

AVAILABLE:

Card 1/1

DUBROV, N.F., kand. tekhn. nauk; MIKHAYLOV, O.A., kand. tekhn. nauk; FEL'DMAN, I.A.; DANILOV, A.M.; SOROKIN, P.Ya., kand. tekhn. nauk, starshiy nauchnyy sotrudnik; BUTAKOV, D.K., kand. tekhn. nauk, dots.; SOYFER, V.M.; LATASH, Yu.V., mladshiy nauchnyy sotrudnik; ZAMOTAYEV, S.P.; BEYTEL'MAN, A.I.; SAPKO, A.I.; PETUKHOV, G.K., kand. tekhn. nauk; YEDNERAL, F.P., kand. tekhn. nauk, dots.; LAPOTYSHKIN, N.M., kand. tekhn. nauk, starshiy nauchnyy sotrudnik; ROZIN, R.M.; NOVIK, L.M., kand. tekhn. nauk, starshiy nauchnyy sotrudnik; LAVRENT'YEV, B.A.; SHILYAYEV, B.A.; SHUTKIN, N.I.; GNUCHEV, S.A., kand. tekhn. nauk. starshiy nauchnyy sotrudnik; LYUDMAN, K.F., doktor-inzh., prof.; GHUZIN, V.G., kand. tekhn. nauk; BARIN, S.Ya.; POLYAKOV, A.Yu., kand. tekhn. nauk; FEDCHENKO, A.I.; AGEYEV, P.Ya., prof., doktor; SAMARIN, A.M.; BOKSHITSKIY, Ya.M., kand. tekhn. nauk; GARNYK, G.A., kand. tekhn. nauk; MARKARYANTS, A.A., kand. tekhn. nauk; KRAMARCV, A.D., prof., doktor tekhn. nauk; TEDER, L.I.; DANILOV, P.M.

Discussions. Biul. TSNIICHM no.18/19:69-105 '57. (MIRA 11:4)

1. Direktor Ural'skogo instituta chernykh metallov (for Dubrov). 2. Direktor TSentral'nogo instituta informatsii chernoy metallurgii (for Mikhaylov). 3. Nachal'nik nauchno-issledovatel'skogo otdela osobogo konstruktorskogo byuro tresta "Elektropech'" (for Fel'dman). 4. Nachal'nik martenovskoy laboratorii Zlatoustovskogo metallurgicheskogo zavoda (for Danilov, A.M.). 5. Laboratoriya protsessov stalevareniya Instituta metallurgii Ural'skogo filiala AN SSSR (for Sorokin).

(Continued on next card)

DUBROV, N.F.---(continued) Card 2.
6. Ural'skiy politekhnicheskiy institut (for Butakov). 7. Starshiy inzhener Bryanskogo mashinostroitel'nogo zavoda (for Soyfer). 8. Institut elektrosvarki im. Patona AN URRS (for Latash). 9. Nachal'nik TSentral'noy zavodskoy laboratorii "Uralmashzavoda" (for Zamotayev). 10. Dnepropetrovskiy metallurgicheskiy institut (for Sapko). 11. Moskovskiy institut stali (for Yedneral). 12. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Gnuchev, Lapotyshkin). 13. Starshiy master Leningradskogo zavoda im. Kirova (for Rorin). 14. Institut metallurgii im. Baykova AN SSSR (for Novik, Polyakov, Garnyk). 15. Nachal'nik tekhnicheskogo otdela zavoda "Bol'shevik" (for Lavrent'yev). 16. Starshiy inzhener tekhnicheskogo otdela Glavspetsstali Ministerstva chernoy metallurgii (for Shilyayev). 17. Zamestitel' nachal'nika tekhnicheskogo otdela zavoda "Elektrostal'" (for Shutkin). 18. Freybergskaya gornaya akademiya, Germanskaya Demokraticheskaya Respublika (for Lyudeman). 19. Zaveduyushchiy laboratoriyey stal'nogo lit'va TSentral'nogo nauchno-issledovatel'skogo instituta tekhnologii i mashinostroyeniya (for Gruzin). 20. Starshiy master elektrostaleplavil'nykh pechey Uralvagonzavoda (for Barin). 21. Zamestitel' nachal'nika elektrostaleplavil'nogo tsekha zavoda "Sibelektrostal'" (for Fedchenko). 22. Zaveduyushchiy kafedroy metallurgii stali i elektrometallurgii chernykh metallov Leningradskogo politekhnicheskogo instituta (for Ageyev). 23. Zamestitel' direktora Instituta metallurgii im. Baykova AN SSSR, chlen-korrespondent AN SSSR (for Samarin).

(Continued on next card)

DUBROV, N.F.---(continued) Card 3.
24. Nachal'nik laboratorii TSentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii (for Bokshitskiy). 25. Zaveduyushchiy kafedroy elektrometallurgii Sibirskogo metallurgicheskogo instituta (for Kramarov). 26. Nachal'nik elektrostaleplavil'nogo tsekha Kuznetskogo metallurgicheskogo kombinata (for Tedor). 27. Nachal'nik elektrometallurgicheskoy laboratorii Kuznetskogo metallurgicheskogo kombinata (for Danilov, P.M.).
(Steel--Metallurgy)

SOV 137-58-7-14459

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 75 (USSR)

AUTHOR: Danilov, A. M.

TITLE: Improved Casting Procedure and Higher-quality Steel Ingots (Uluchsheniye tekhnologii razlivki stali i kachestva slitka)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii, 1957, Vol 18, pp 563-571

ABSTRACT: A presentation of results achieved at the Zlatoust metallurgical plant after the introduction of the following measures: Control of mold lubrication; employment of special furnaces for drying of central extensions and hot heads; employment of thin-walled molds, molds with chamfered edges, and widened extension hot heads; utilization of fireclay sprues for molds with an opening of 50 mm in diameter, extra-thick siphon brick, as well as terminal bricks without a "pocket" at the end of the channel; improved life expectancy of plugs employed in 160 t steel-casting ladles; regulation of casting procedures for various types of steel as well as of procedures for filling in the base of the mold and the hot head; heating of hot heads on ingots of steel 18KhGT and improving the heating procedures by

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SOV 137-58-7-14459

Improved Casting Procedure and Higher quality Steel Ingots

employing [sinker e[ffa]n exothermic compound. Trans[l]. Ed Note]. employ ment of wooden frames and lids during casting; improvement of casting pro cedures for steel [Kr 18N9T reduction of time required for transfer of hot ingots to the blooming mill; modification of parameters of ingots weighing 2.7 2.0 and [illegible] tons, especially relative to the degree of taper and the height diameter ratio

[illegible]

A Si

Card 2/2

AUTHORS: [illegible]

TITLE: Smelting of [illegible] Manganese Iron at D.[illegible] [illegible] Antimony Steel Scrap-[illegible] [illegible]

PERIODICAL: Stal', 1958, No. 1, p. [illegible] (USSR).

ABSTRACT: In view of the widening application [illegible] pig iron for smelting quality steels, the problem was investigated on tube steels 20П (TY [illegible]) and 20ХГСА (TY [illegible]). Smelting of steel was carried out with cold charge containing 70% of scrap and 30% of pig of standard quality (Mn 1.4 - 2.0%) and with two kinds of low-manganese pig with 0.4-0.7% Mn and 0. - 0.4% Mn. The proportion of limestone in the charge was on average 2.5 - 2.8%. The main part of the slag was removed during the period of pre-boiling. Steel was poured into square ingot-moulds of 3.6 tons with bottom and part tops. Low-sulphur fuel was used for firing furnaces. Data obtained from normal production were compared with those from the experimental melts which were carried out according to three different practices: 1) with standard pig with an addition of ferro-manganese at the end of the pre-boiling period; the manganese [illegible] content during the period of pre-boiling was maintained not

Smelting of Tube Steel by the Scrap Process from a Low-Manganese Iron at Different Manganese Practices

lower than 0.20%; 2) with low-manganese pig with an addition of manganese at the end of the ore boiling period the manganese content during pure boiling was maintained not lower than 0.20%, and 3) with low-manganese pig without ferro-manganese addition and without maintaining a regular manganese level during refining. During the experimental melts, standard operating conditions were maintained, taking samples of metal and slag; during rolling samples of metal for testing were taken from the semis made from the top parts of ingots. The control of non-metallic inclusions was carried out according to ГОСТ 1778-42 and in samples taken from the bath by the Works' own method (Ref.4). The determination of oxygen in steel was done by the aluminium method and that of hydrogen by extraction at 650 - 700 °C. Changes in the velocity of de-carburisation during the period of ore boiling as well as changes in the content of phosphorus and sulphur in metal after the melt out at various manganese contents are given in Table 1 and Fig.1; the content of sulphur in the metal from melts carried out with oxidation and reduction of manganese during the period of pure boiling - Table 2; ЭОХГСА steels under various manganese practices - Table 3; the dependence of the distribution of sulphur between

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metal and slag on slag basicity - Fig.2, and that on the content of MnO in slag before de-oxidation (41-50% CaO) - Fig.3; the relationship between the velocity of solution of CaO in slag during the ore-lime boiling with the content of manganese in metal after the melt out - Fig.4; indices of gas content and the content of impurities in samples of metal taken during the period of pure boiling and after the addition of manganese - Table 4; the dependence of oxygen content of metal before deoxidation on the manganese practice and the velocity of de-carburisation during the period of pure boiling - Fig.5; the dependence of the proportion of the first quality rolled metal on the content of oxygen before deoxidation - Fig.6; the main indices of the smelting process of 20П and mechanical properties of steels 20П and 30 ХГСА produced under different manganese practices - Table 5. Conclusions: 1) The use of low-manganese iron and smelting of steel by the scrap process without additions of ferro-manganese does not deteriorate the quality of steel, but decreases the duration of the process and decreases the specific consumption of ferro-manganese. 2) An increase in

Smelting of Tube Steel by the Scrap Process from a Low-manganese Iron at Different Manganese Practices

the manganese content of metal by additions of ferro-manganese does not protect the boiling bath from over-oxidation and leads to a contamination of steel by non-metallic inclusions. 3) Under normal conditions of pure boiling (with normal slag and reduction of manganese) and using low-sulphur fuel smelting of steel by the scrap process from low-manganese pig and without ferromanganese additions is not accompanied by a decrease in the degree of dephosphorisation and desulphurisation of metal or by a deterioration in the strength and plastic properties of steel (in particular, at negative temperatures, up to -60 °C). 4) The degree of oxidation and desulphurisation of steel and the proportion of rejects and mechanical properties of metal are independent from the absolute content of manganese in the metal during the course of smelting. 5) The investigation confirmed that the change introduced into the technological instruction, i.e. that the manganese content in metal during the course of smelting, including the period of pure boiling, does not necessarily need to be strictly controlled, is rational. N.I. Lebedkin, E.P. Okhrimovich and others, members of the staff of the Works and Institute participated in the work. There are 5 tables, 6 figures and

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Smelting of Tube Steel by the Scrap Process from a Low-manganese Iron at Different Manganese Practices

21 Russian references.

ASSOCIATION: Urals Scientific Research Iron and Steel Institute (Ural'skiy n.-i institut chernykh metallov) and Zlatoust Metallurgical Works (Zlatoustovskiy metallurgicheskiy zavod)

AVAILABLE: Library of Congress

Card 5/5

DANILOV, Aleksey Matveyevich

[Principal factor in increasing the productivity of labor in Kazakh industry] Glavnyi faktor povysheniia proizvoditel'nosti truda v promyshlennosti Kazakhstana. Alma-Ata, Kazgosizdat, 1960. 145 p. (MIRA 15:4)
(Kazakhstan—Labor productivity)
(Kazakhstan—Technological innovations)

FOFANOV, A.A., kand.tekhn.nauk; LEYSOV, Ye.I., inzh.; YEL'KIN, S.A., inzh.; MILYAYEV, M.N., inzh.; PASTUKHOV, A.I., kand.tekhn.nauk; DZEMYAN, S.K., inzh.; KOSNAREV, A.S., inzh.; KLEYN, A.L., kand.tekhn.nauk; DANILOV, A.M., inzh.; FILIPPOV, A.S., kand.tekhn.nauk; SALTANOV, G.F., inzh.; VETROV, B.G., inzh.; PISARENKO, G.A., kand.tekhn.nauk; RADYA, V.S., inzh.; GEROTSKIY, V.A., inzh.

In the Ural Mountain Region Scientific Research Institute for Ferrous Metals. Stal' 22 no.10:892,916,938,953 O'62. (MIRA 15:10)
(Ural Mountain region—Metallurgical research)

LEVENETS, N.P.; SAMARIN, A.M.; SEMIKIN, I.D.; KAZAKOV, V.E.; BEMBINEK, Ye.I.; PANYUKHNO, L.G.; SVINOLOBOV, N.P.; AVERIN, S.I.; SMIRNOV, V.M.; ZELENSKIY, V.D.; LAYKO, B.G.; TISHCHENKO, O.I.; OKHRIMOVICH, B.P.; DANILOV, A.M.; TISHKOV, Yu.Ya.; PANOV, M.A.; MARKELOV, A.I.; PETROV, A.K.; VASILEVSKIY, P.A.; PASYUK, K.I.; NESTEROV, V.I.; KHRUSTAL'KOV, L.A.; GLAZKOV, V.S.; MAKAGON, V.G.; FOMIN, G.G.; TRISHCHENKO, V.D.; KORZH, V.P.; SUYAROV, D.I.; ARSEYEV, A.V.; PAVLYUCHENKO, A.A.; ZHADAYEV, V.G.; KONDORSKIY, R.I.; MOROZOVA, I.A.; KOCHETOV, V.V.; PRUZHINER, V.L.; MALEVICH, I.A.; MALIOVANOV, D.I.; ZAKOVRYASHIN, I.I.; NOVSKIY, I.S.; NOVIKOVA, V.P.; GRISHIN, K.N.; MOSKOVSKAYA, M.L.; KORNEYEV, B.M.

Inventions. Met. i gornorud. prom. no.3:75-76 My-Je '64.
(MIRA 17:10)

L 30002-65 EWT(m)/EWA(d)/EWP(t)/EWP(b) IJP(c) JD/WB
ACCESSION NR: AP4046385 S/0020/64/158/003/0702/0705

AUTHOR: Foldn, M.N.; Timonin, V.; Danilov, A.M.

TITLE: Coulometry of the process of formation of an oxide film during passivation of titanium

SOURCE: AN SSSR. Doklady, v. 158, no. 3, 1964, 702-705

TOPIC TAGS: titanium passivation, coulometry, oxide film, film formation, titanium oxidation, galvanostatic passivation

ABSTRACT: An attempt was made to determine quantitatively the share of electricity consumed in the formation of a passive film on titanium, with consideration of current leakage due to the combined processes of anode discharge connected with material transfer of the reaction products in the electrolyte. Experiments on galvanostatic passivation were conducted in 10-25% HCl at 60, 70, and 80C; in 10 N(40%) H_2SO_4 at 20, 40, and 60C; and in 70% H_3PO_4 at 90C. The experimentally determined magnitude $k = (4.4 \pm 0.5) \cdot 10^{-3}$ coulombs/cm^2, which characterizes the consumption of electricity for the formation of a surface (oxide) layer during the passivation of titanium, was practically independent of the anionic composition, acidity, and temperature in the solutions. A determination was made

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ACCESSION NR: AP4046385

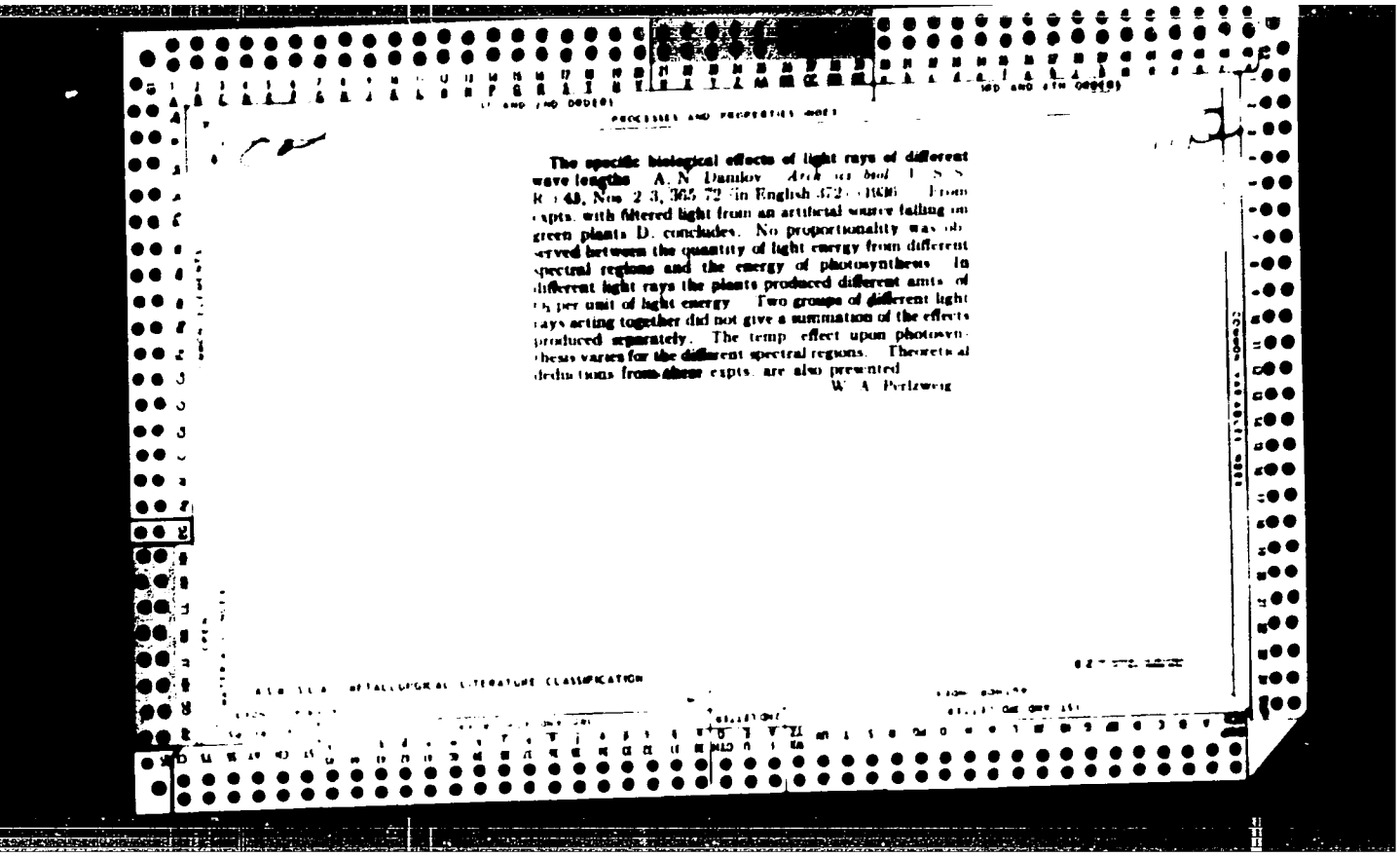
of the passivation time τ_p (when i = const) as a function of the time of exposure of the sample in the solution. For short exposures in the solution, the residual air-oxide film on the titanium reduced the time required to achieve passivation and this was reflected in a reduced consumption of electricity. With increased duration, the increase in passivation time was at first smooth and then rose sharply, due apparently to the rising difference with time between the true and apparent current density in the process of solution (i_0). Orig. art. has: 3 figures, 1 table and 2 formulas.

ASSOCIATION: Institut fizicheskoy khimii Akademii Nauk SSSR (Institute of Physical Chemistry, Academy of Sciences SSSR)

SUBMITTED: 13Apr64 ENCL: 00 SUB CODE: GC, EM

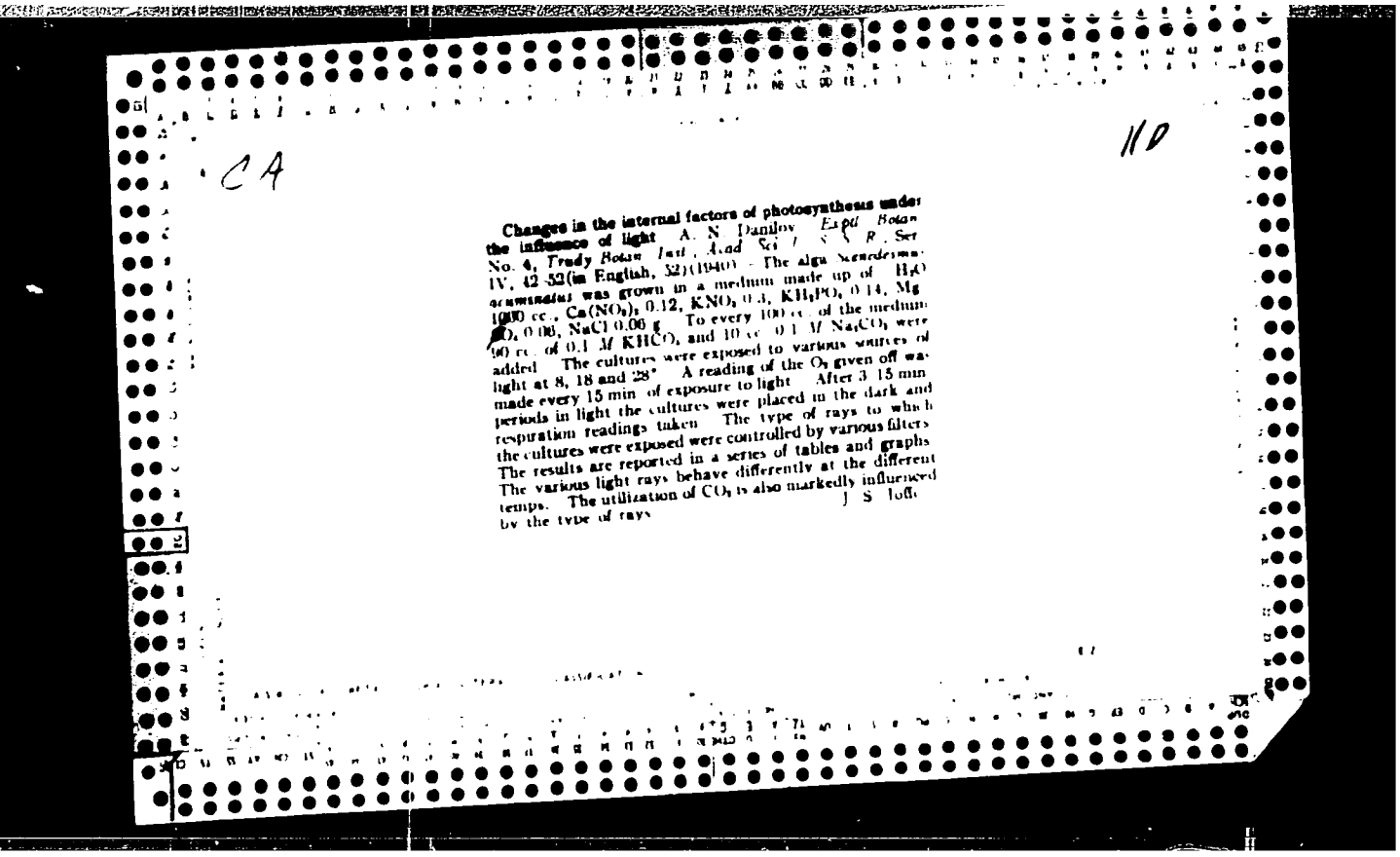
NO REF SOV: 001 OTHER: 006

Card 2/2



The specific biological effects of light rays of different wave lengths. A. N. Danilov. *Arch. sci. biol.* U. S. S. R. 43, Nos. 2-3, 365-72 (in English 372-[illegible]). From expts. with filtered light from an artificial source falling on green plants D. concludes. No proportionality was observed between the quantity of light energy from different spectral regions and the energy of photosynthesis. In different light rays the plants produced different amts. of O_2 per unit of light energy. Two groups of different light rays acting together did not give a summation of the effects produced separately. The temp. effect upon photosynthesis varies for the different spectral regions. Theoretical deductions from these expts. are also presented.

W. A. Perlzweig



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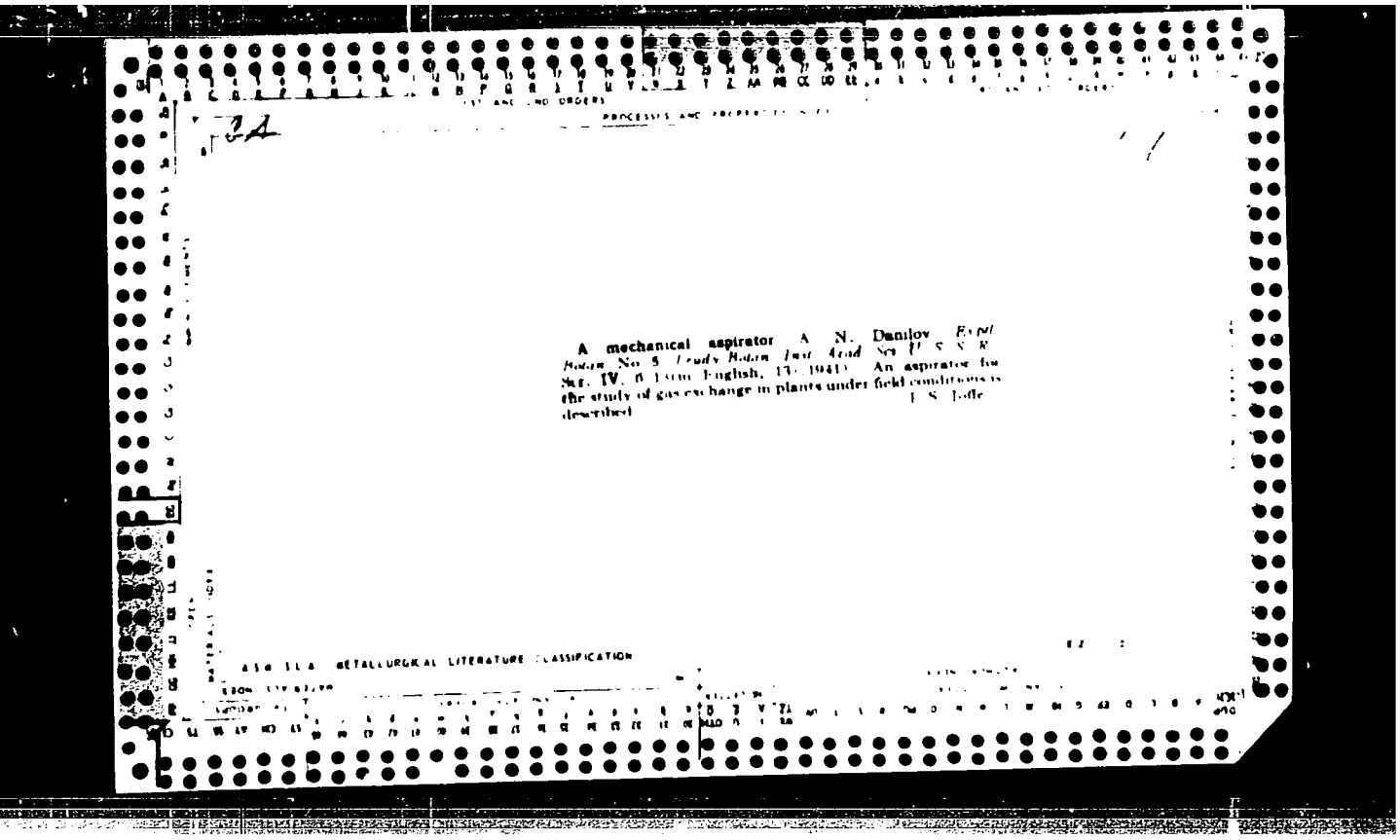
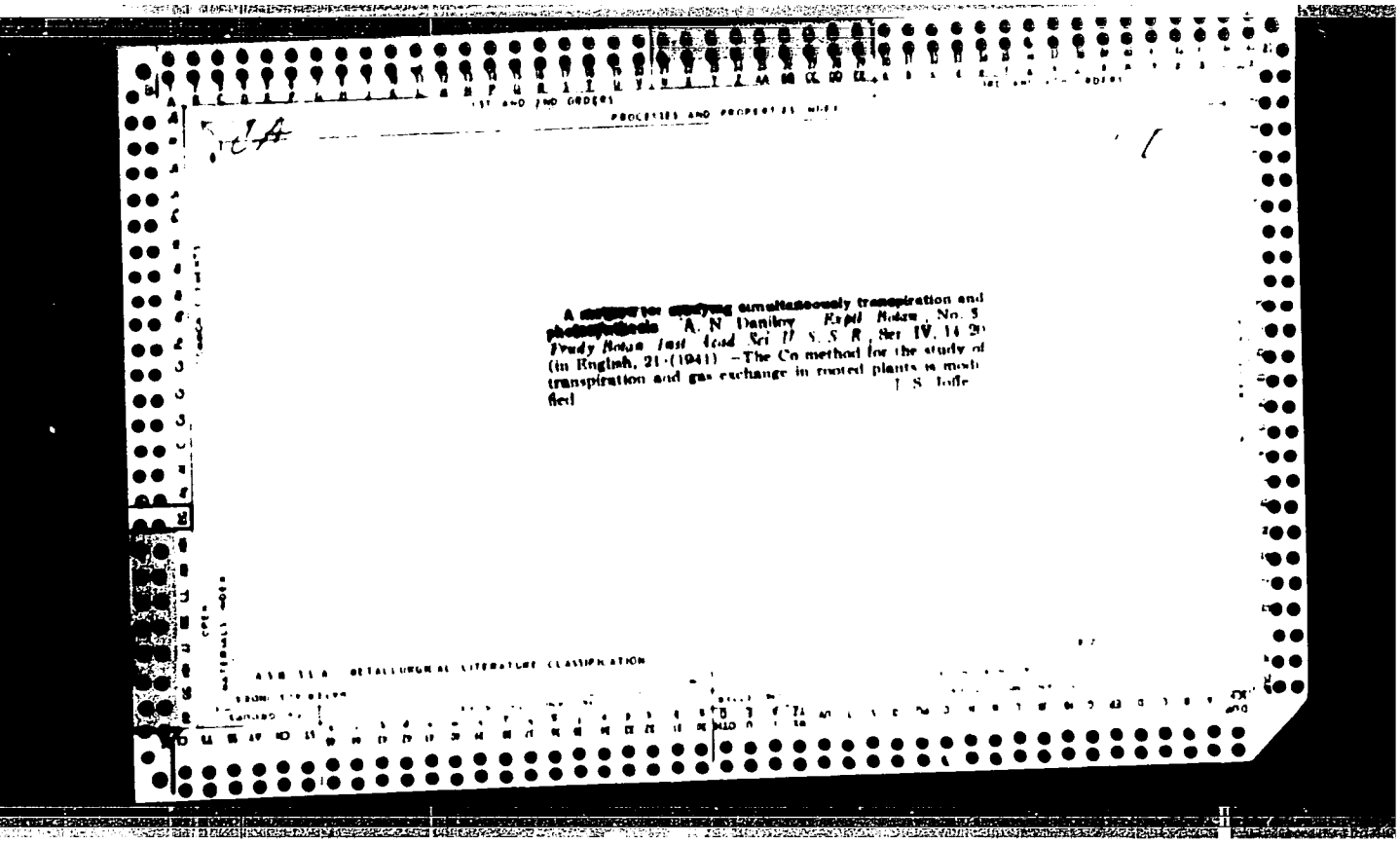
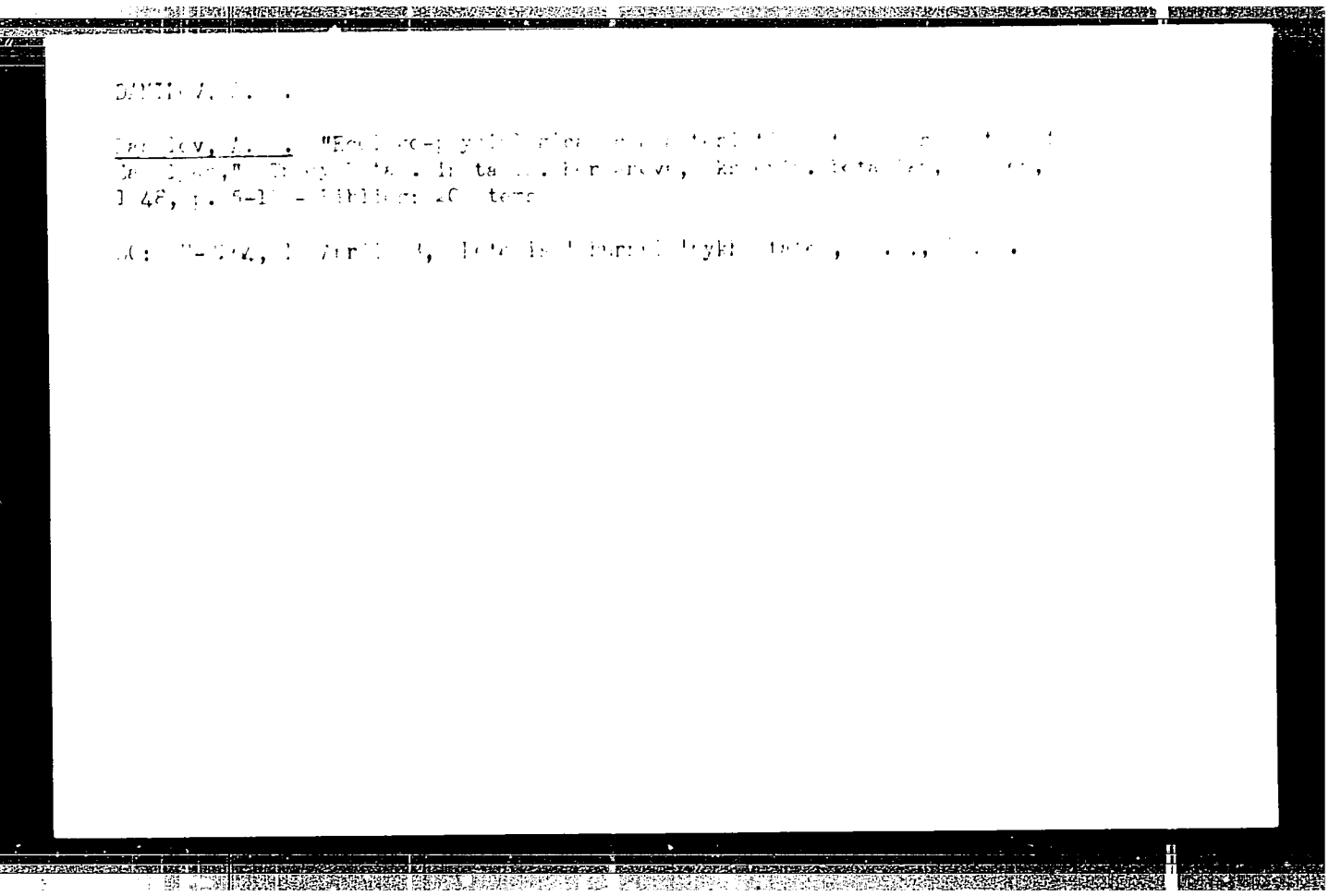
Changes in the internal factors of photosynthesis under the influence of light A. N. Danilov *Exptl. Botan. No. 4, Trudy Botan. Inst., Acad. Sci. U. S. S. R., Ser. IV*, 42-52(in English, 52)(1940). - The alga *Scenedesmus acuminatus* was grown in a medium made up of H_2O 1000 cc., $Ca(NO_3)_2$ 0.12, KNO_3 0.3, KH_2PO_4 0.14, Mg SO_4 0.08, NaCl 0.00 g. To every 100 cc. of the medium 90 cc. of 0.1 *M* $KHCO_3$ and 10 cc. 0.1 *M* Na_2CO_3 were added. The cultures were exposed to various sources of light at 8, 18 and 28°. A reading of the O_2 given off was made every 15 min. of exposure to light. After 3-15 min. periods in light the cultures were placed in the dark and respiration readings taken. The type of rays to which the cultures were exposed were controlled by various filters. The results are reported in a series of tables and graphs. The various light rays behave differently at the different temps. The utilization of CO_2 is also markedly influenced by the type of rays. J. S. Joffe

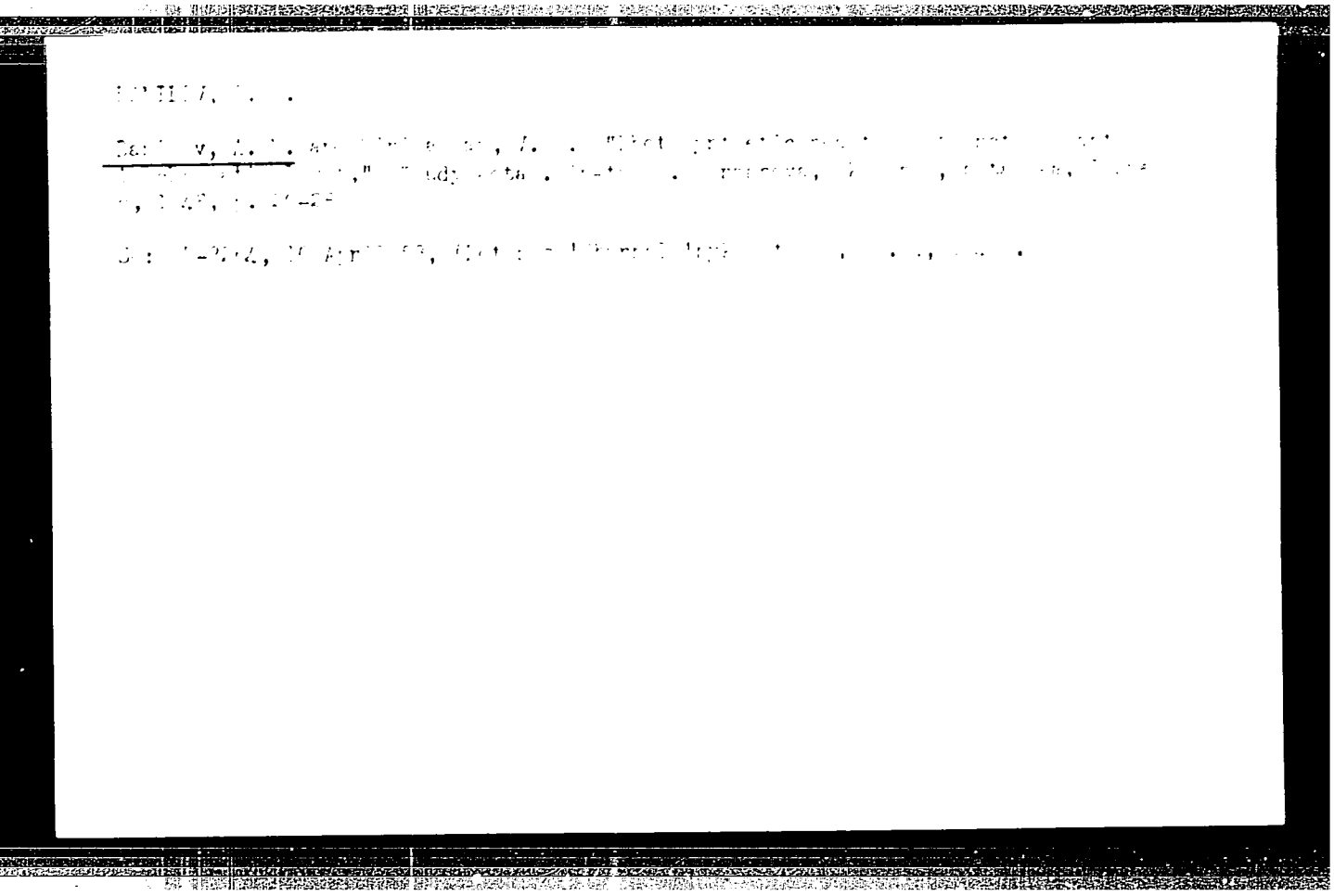


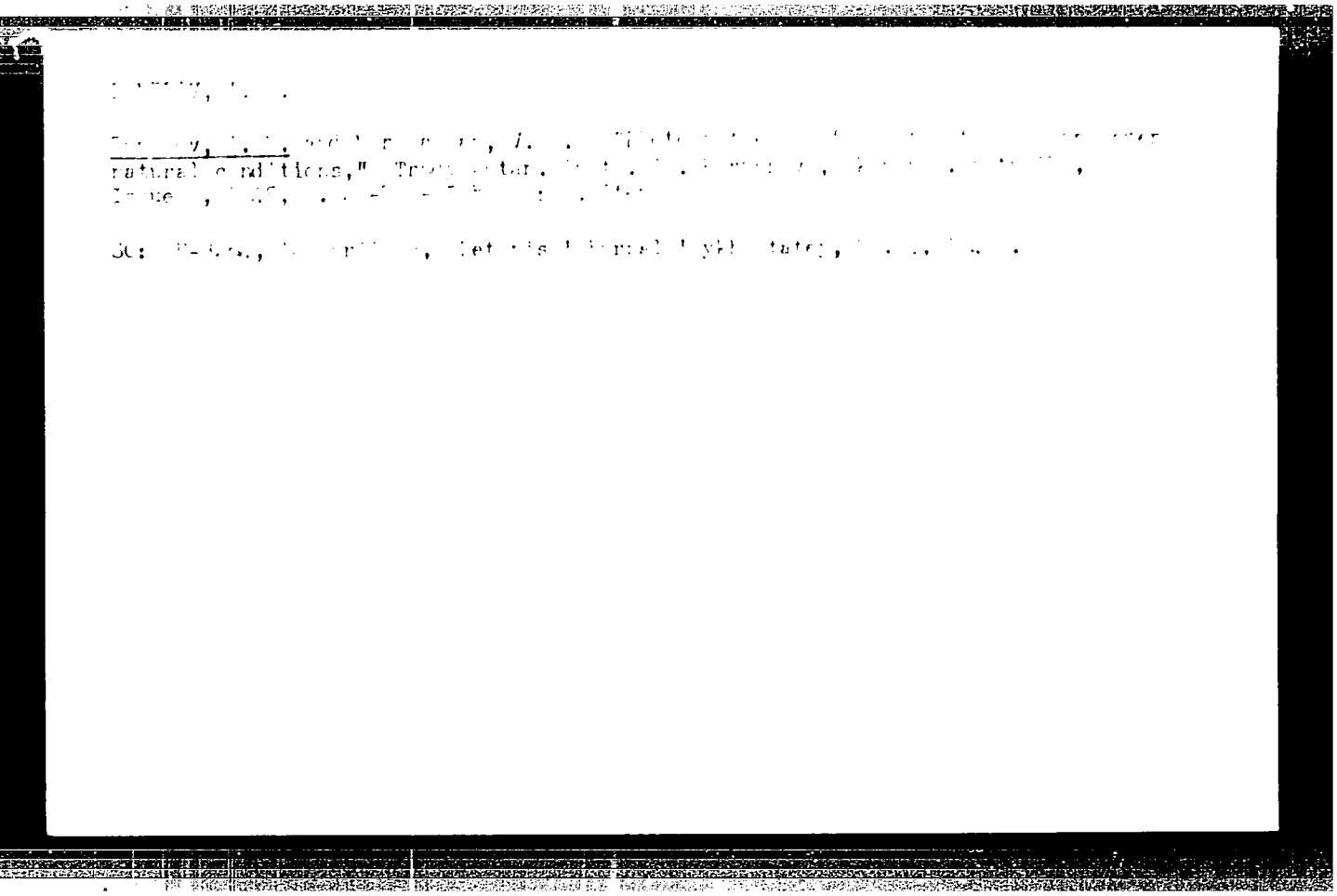
A mechanical aspirator A. N. Danilov. *Fiziol. Zhurnal S.S.S.R. im. I. M. Sechenova* [*Physiol. J. U.S.S.R.*], No. 5 (Trudy Inst. Akad. Nauk S.S.S.R., Ser. IV, 6) 1 (Russ. English, 17) (1941). An aspirator for the study of gas exchange in plants under field conditions is described. I. S. Joffe



A [illegible] for studying simultaneously transpiration and photosynthesis. A. N. Danilov. *Rapid Methods*, No. 5 *Study Methods Inst. Acad. Sci. U. S. S. R.*, Ser. IV, 14 29 (in English, 21 (1941). —The Co method for the study of transpiration and gas exchange in rooted plants is mostly [illegible] fied. I. S. Ioffe







[illegible]

Danilov, A. I. "[illegible]," [illegible], [illegible] items

[illegible]

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82243

AUTHORS: Aleksandrov, V. V., Danilov, A. N., Engineer

TITLE: Improving the Technology of Pressure Die Casting

PERIODICAL: Mashinostroitel', 1960, No 3, p 41

TEXT: The pressing chamber of pressure die casting machines is one of the units which is subjected to highest thermal loads, since it is in contact with the molten metal during a considerably longer time than the gate system and the press-mold. Although press chambers are generally made of the alloyed steel grades 3Kh2V8 (3Kh2V8) and 3Kh13 (3Kh13) and heat treated up to a hardness of 60-62 RC, they comparatively quickly get out of order and their life does not amount to more than 30-40 pressing operations. In order to eliminate this deficiency the authors suggest a new design of pressing chamber which is made of two parts, a permanent housing of carbon steel or cast iron and an interchangeable bushing made of graphite. Test specimens of these bushings were made from electrode remainders of electric arc furnaces. The durability of such graphite bushings exceed that of ordinary pressing chambers by 4-5 times. Moreover, the antifriction properties of graphite, which make it possible to do

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Improving the Technology of Pressure Die Casting AC4/AC1 82243

away with the lubrication of the inner chamber walls, and the fact that worn bushings can be changed within a short time, ensures an increased efficiency of the machine, particularly with the pressure die casting of high-melting alloys. Another important factor, determining the quality of castings, durability of individual machine units and operational efficiency, is the lubrication of press-molds. The lubricants used at present consist of expensive organic compounds (stearin, beeswax etc., costing between ... and 60,... rubles per kg) and graphite. Referring to the practice and data of foreign firms, the authors suggest to use liquid colorless cylinder oil with small graphite additions. This lubricant proved to be very efficient for the casting of aluminum alloys (pouring temperature = 640-730°C and press-mold temperature = 250-...°C). For the casting of thick-walled components, when the press-mold temperature rises up to 340°C, a heavier cylinder paste is used. The authors tested a number of lubricants during the casting of small-sized and medium-sized aluminum alloy components and steel parts. The best results were obtained with the "Viol" cylinder oil - GOST (GOST) 6411-52, having a viscosity of ... which possesses the necessary viscosity when applied to the press-mold. There are 3 figures.

Card 2/2

DANILOV, A.N.

Increase labor productivity daily. Kons. i ov. prom. 16 no.7:
33-34 Jl '61. (MIRA 14:8)

1. Staritskiy ovoshchesushil'nyy zavod.
(Canning industry) (Labor productivity)

DANILOV, A.N.

For greater industrial capacity and for more efficient utilization of waste materials. Kons. i ov. prom. 16 no.9:31-32 S '61. (MIRA 14:8)

1. Staritskiy ovochchesushil'nyy zavod.
(Staritsa--Canning industry)

AKZHANIKOV, Nikolay Sergeyevich; SALEKOVA, Galina Sadekovna; KRASNOV, N.F., doktor tekhn. nauk prof., retsenzent; KOSHEVOY, V.N., dots., retsenzent; DANILOV, A.N., dots., retsenzent; BELYAKOVA, Ye.V., red.

[High-velocity aerodynamics] Aerodinamika bol'shikh skorostei. Moskva, Vysshaia shkola, 1965. 558 p. (MIRA 19:1)

1. Zaveduyushchiy kafedroy aerodinamiki Moskovskogo vysshego tekhnicheskogo uchilishcha im. Baumana (for Krasnov). 2. Kafedra aerodinamiki Moskovskogo vysshego tekhnicheskogo uchilishcha im. Baumana (for Koshevoy, Danilov).

BOROVTSOV, S.Z.; KONAROVSKIY, M.A.; DANILOV, A.P.

Use of the "Druzhba" gasline-motor saw. Geod.i kart. no.3: 51-52 Mr '60. (MIRA 13:6)
(Chain saws)

DANILOV, A.S.; SINEL'SHCHIKOV, R.G.

Wild sweet cherry in forests of northern Ossetia. Bot. zhur. 43 no.2: 262-266 F '58. (MIRA 11:5)

1. Voronezhskiy lesotekhnicheskiy institut.
(North Ossetian A.S.S.R.--Cherry)

POKROVSKIY, K.V.; FARZANE, N.G.; DANILOV, A.S.; RAZAMAT, M.S.

Determining condensate losses in layers during the exploitation of condensate gas wells without maintaining reservoir pressure. Izv. vys. ucheb. zav.; neft i gaz no.8:47-52 '58. (MIRA 11:10)

1.Azerbaydzhanskiy industrial'nyy institut im. M. Azizbekova.
(Apsheron Peninsula--Condensate oil wells)

POKROVSKIY, K.V.; FARZANE, N.G.; DANILOV, A.S.; RAZMAT, M.S.

Experimental study of changes in condensate gas recovery and in the industrial gas factor during the exploitation of condensate pools without sustaining pressure. Izv.vys.ucheb.zav.; neft' i gaz 1 no.11:71-76 '59. (MIRA 12:5)

1. Azerbaydzhanskiy industrial'nyy institut im. M.Azizbekova.
(Condensate oil wells)

DANILOV, A.S.

Using the compressibility factor of the gas for calculating the reserves of condensate fields. Gaz.prom. 4 no.9:1-4 S '59. (MIRA 12:11)

(Condensate oil wells)

DANILOV, A.S.

Equilibrium chamber for P-V-T installations. Izv.vys. ucheb.zav.; neft' i gaz 3 no.6:105-110 '60.
(MIRA 13:7)

1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova.
(Phase rule and equilibrium)

88513

S/179/60/000/006/004/036
E191/E135

26.4110

AUTHOR: Danilov, A.S., (Moscow)

TITLE: On the Flow of Wet Air in the Nozzles of Wind Tunnels

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1960, No. 6, pp. 24-37 (+ 1 plate)

TEXT: The supersonic flow of wet air accompanied by condensation taking place in the nozzles of wind tunnels is considered. The physical phenomena in the flow of wet air are discussed. Similarity considerations are invoked to determine the number and nature of the quantities by which the flow is characterized. In the range of moisture contents considered, it is stated that only a small fraction of the heat released in condensation is used for the heating up of the droplets. This reduces the number of physical properties of steam which determine the flow. In the first approximation, 23 parameters determine the flow. Five independent dimensions are used and 20 independent non-dimensional numbers can be defined. For the first

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approximation, these are reduced to 5 numbers. In order to evaluate the experimental data, three physical quantities, namely the temperature in the storage tank, the moisture content (kg/kg of dry air) of the air and the relative humidity, and also the nozzle geometry, given by the throat cross-section and the opening angle in the accelerating part, must be known. Tests were carried out with nozzles having exit cross-sections between 20 x 20 mm and 80 x 80 mm, with opening angles of the accelerating length between 0.02 and 0.2 radians. The exit Mach number was varied from 1.5 to 3.0, the tank pressure from 1.5 to 6.0 ata and the moisture content from 2.0 to 11.5 g/kg. The observations were made with the Toepler device or the Mach-Zender interferometer. It was found that the pattern of flow depends mainly on the position of the condensation region and the nozzle geometry. Condensation near the critical cross-section is accompanied by discontinuities. As the condensation region moves along the nozzle, sudden condensation gradually changes to progressive condensation. The position of the condensation region

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On the Flow of Wet Air in the Nozzles of Wind Tunnels

depends mainly on the relative moisture which, in the present tests, was varied by changing the stagnation temperature. It was possible to predict the stagnation temperature at which condensation discontinuities disappear; with which the measured temperature agrees to within 5 °C. For the purpose of this prediction, the magnitude of undercooling the moisture in the nozzle must be known so that the cross-section of the nozzle where the condensation starts can be found. A relationship derived by Ya.I. Frenkel' ("The Kinetic Theory of Liquids", AS USSR, 1945) for the rate of condensation of pure steam, is used. Several simplified assumptions are made so that only an approximate value could be expected. An equation is derived to obtain the coordinate of the cross-section at which the condensation starts. This is defined by the threshold given by the accuracy of measurement, namely 1 mg moisture per kilogramme of air. The calculations are compared with known experimental results. Depending on the relative moisture values, undercooling margins first rise from 15 °C to 65 °C and then fall to 40 °C. The diffusion of water vapour into the

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S/179/60/000/006/004/036
E191/E135

On the Flow of Wet Air in the Nozzles of Wind Tunnels

condensed droplets from the surrounding air-water mixture is calculated and the rate of condensation is determined. After reaching a certain undercooling, as determined earlier, a small part of the moisture has condensed into the small droplets. Further condensation proceeds by diffusion into already existing droplets. New droplets do not form further downstream because the undercooling diminishes. It is assumed that the original droplets have a radius of 0.5-1 microns. Molecular phenomena can be neglected because the mean free path is below 0.1 microns. The equation of water vapour diffusion and of the heat flow formed during condensation is formulated. After some transformations and simplifications based on the evaluation of possible errors, an equation is derived by which, from the knowledge of the mean water vapour concentration in each cross-section of the nozzle, the entire flow in the nozzle in the presence of the condensation can be determined. A further simplification is introduced for large nozzles intended to obtain arbitrary Mach numbers. These derivations disagree with those of K.L. Oswatitsch (Ref.7) who

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assumed too low a value for the undercooling margin and took only atmospheric dust particles as nuclei of condensation. The analysis of flow after the beginning of condensation is carried out and it is shown that the continuity equation can be used without consideration of condensation. The total pressure recovery coefficient as a function of the relative moisture content in the critical cross-section of the nozzle is illustrated in Figs 4, 5 and 6. The results of calculations by the simplified method of the present paper and experimental points are reproduced, showing a fair measure of agreement. Different absolute moisture contents and different nozzle geometries are included. The tests were carried out within a range of conditions described earlier.
There are 6 figures and 11 references: 4 Soviet and 7 non-Soviet.

SUBMITTED: June 30, 1960

Card 5/5

DANILOV, A. S., Cand. Tech. Sci. (diss) "Investigation of System of Cooling of Truck and Tractor Diesels," Ul'yanovsk, 1961, 15 pp (Chelyabinsk Inst. Mechaniz. and Electrif. Agric.) 150 copies (KL Supp 12-61, 266).

DANILOV, A.S.

Coefficient of reservoir conditions for gas condensate fields.
Izv. vys. ucheb. zav.; neft' gaz 3 no.8:45-52 '60. (MIRA 14:4)

1. Azerbaydzhanskiy institut nefti i khimii imeni M.Azizbekova.
(Condensate oil wells)

POKHOVSKIY, K.V.; KOLMANYAN, S.R.; DANILOV, A.S.

Method for calculating gas and condensate potentials of condensate gas fields. Izv. vys. ucheb. zav.; neft' i gaz 3 no.10:69-73 '60. (MIRA 14:4)

1. Azerbaydzhanskiy institut nefti i khimii imeni M. Azizbekova.
(Condensate oil wells)

POKROVSKIY, K.V.; KOLMANYAN, S.R.; DANILOV, A.S.

Example of calculating reserves of gas-condensate fields by various methods and their comparative evaluation. Izv. vys. ucheb. zav.; neft' i gaz 3 no.12:65-72 '60. (MIRA 14:10)

1. Azerbaydzhanskiy institut nefti i khimii imeni M. Azizbekova.
(Condensate oil wells)

POKROVSKIY, K.V.; KOLMANYAN, S.R.; DANILOV, A.S.

Thermodynamic bases for determining potential gas and condensate reserves of gas-condensate fields. Izv. vys. ucheb. zav.; nefti i gaz 3 no.7:53-58 '60. (MIRA 15:5)

1. Azerbaydzhanskiy institut nefti i khimii imeni M. Azizbekova.
(Condensate oil wells)

POKROVSKIY, K.V.; DANILOV, A.S.

Changes in the gas factor of gas-condensate wells. Izv. vys. ucheb. zav.; neft' i gaz 4 no.3:47-52 '61. (MIRA 16:10)

1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova.

ACC NR. AP7002561 (A, N) SOURCE CODE: UR/0413/66/000/0[illegible]042/0042

INVENTORS: Mayzol'a, Ye. N.; Danilov, A. V.

ORG: none

TITLE: Device for channelling very short waves. Class 21, No. 189047

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 42

TOPIC TAGS: waveguide, submillimeter wave

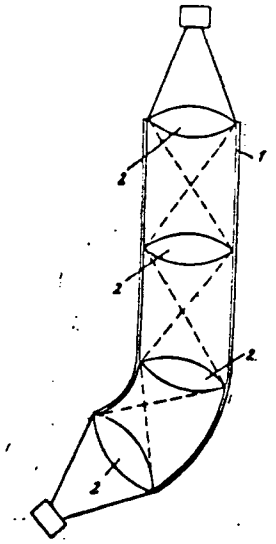
ABSTRACT: This Author Certificate presents a device for channelling very short waves, in the form of a metallic waveguide of circular or rectangular cross section. To decrease attenuation of the wave, guiding lenses or prisms are placed inside the waveguide so that the minimal field is formed at the surface of the waveguide walls (see Fig. 1). The cross section of the waveguide comprises several wavelengths. Direction of energy from the source to the receiver is insured with the help of horn devices.

Card 1/2 UDC: 621.372.82

0930 3695

ACC NR: AP7002561

Fig. 1. 1 - waveguide; 2 - guiding lenses



Orig. art. has: 1 diagram.

SUB CODE: 09/ SUBM DATE: 23Feb48

Card 2/2

MYULLER, R.L.; DANILOV, A.V.; MARKOVA, T.P.; MEL'NIKOV, V.N.; NIKOL'SKIY, A.B.; REPINSKIY, S.M.

Kinetics of solution of germanium in acid and basic solutions of hydrogen peroxide. Vest. LGU 15 no.4:80-87 '60. (MIRA 13:2)
(Germanium) (Hydrogen peroxide)

26.2421
9,4300 (1164, 1385, 1072)

S/080/61/034/001/008/020
A057/A129

AUTHORS: Myuller, R.L., Danilov, A.V., Yang Ying kuei

TITLE: Concerning the Problem of Low-Temperature Treatment of Chemically Precipitated Lead Sulfide Films

PERIODICAL: Zhurnal Prikladnoy Khimii, 1961, Vol. 34, No. 1, pp. 71-78

TEXT: Changes in the electroconductivity of lead sulfide films treated at low temperatures were measured to determine the kinetics of chemical processes. Photosensitive lead sulfide films can be obtained in two ways: I. by sublimation in vacuum and following treatment with oxygen [Ref.2: S.M. Ryvkin, ZhTF,22,1930 (1952), Ref.3: B.T. Kolomiyets, Izv.AN SSSR, ser.fiz.16,70 (1952)] or II. by precipitation on glass slides from an alkaline solution of lead acetate and carbamide [Ref.1: G. Bruckmann, Kolloid Z.,65,1 (1933)] and following heating at 100°C in vacuum [Ref.4: F. Kicinski, Chem.Ind.,17,54 (1948)] or oxidation during precipitation [Ref.5: G.W. Mahlman, Phys.Rev.,103,1619 (1956), Ref.6: R.Ya. Berlaga, F.T. Novik, and L.P. Strakhov, FTT,1,995 (1959)] [Abstracter's note: Ref.5 deals with effects of oxygen on PbS films obtained

Card 1/10

22527
S/081/61/034/001/008/020
A057/A129

Concerning the Problem of Low-Temperature Treatment of Chemically Precipitated Lead Sulfide Films

by sublimation]. The scope of the present paper was to solve the problem of the chemistry of preparing precipitated PbS films and the effect of thermal treatments. Other investigators [Ref.2-6, Ref.7: R.Ya. Berlage, Vestn. LGU, 7, 9 (1952), Ref.8: B. Reuter, R. Stein, Z.Elektrochem., 61, 440 (1957)] assumed that oxidation of the PbS films occurs. In the present work primarily optimum conditions for the preparation of precipitated PbS films were determined and the following solutions were used: 0.1 M Pb $(C_2H_3O_2)_2 \cdot 3\ H_2O$; 0.6 M CS $(NH_2)_2$; and 2.0 M NaOH. In Table 1 compositions of the used mixtures A and B are given. The PbS films were precipitated on glass slides ($25.6 \times 10.7 \times 1.5\ mm^3$) and the film thickness determined by Mahlman's method (Ref.5). Before precipitation of the sulfide an introduction period (3 min until 3 hrs) was observed. This period differs for different solutions and could not be controlled. Composition of the solution and the holding time of the glass slide do not determine the thickness and conductivity of the obtained PbS films (Tab.2). Homogeneous PbS films of approximately the same thickness and conductivity were obtained by simultaneous precipitation on 3, 5, or 4 glass

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A057/A129

Concerning the Problem of Low-Temperature Treatment of Chemically Precipitated Lead Sulfide Films

slides in one solution (see Table 2). The growing rate of the films in time was determined in solution A and it was observed that 1 - 1.5 h immediately after the induction period a linear increase (2 mg per 1.4 - 1.6 h) occurs. The solution contained 10^{-5} mole/ml lead and diffusion rate of Pb-ions towards the surface of the glass slide was (at 20°C) $w \simeq 2 \cdot 10^{-3} [Pb^{++}] = 2 \cdot 10^{-8}$ mole/cm^2 · sec. Thus the growing rate of the film is controlled by the rate of formation of PbS immediately on the surface of the glass slide and not by diffusion. The effect of heat treatments on the PbS films was investigated by measurements of conductivity using a ЭПТВ-51 (EPTV-51) apparatus with automatic recording of voltage versus time curves. Passing dried air or oxygen through the solution repeated heating of the solution caused a decrease of conductivity of the PbS film (Fig. 1). This had already been observed (Ref. 3) and explained by oxidation of the sulfide. In order to revise this assumption, in the present experiments other gases were used (Fig. 2, N_2, CO_2 and H_2) and the same maxima were obtained on the curves. It was noted that a decrease in coductivity is not due to an oxidation of the film by oxygen. Decrease in conductivity is indicated by two maxima, one at 100 ± 5°C and the other at 150 ± 10°C (Fig. 2). Electron microscope patterns

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Concerning the Problem of Low-Temperature Treatment of Chemically Precipitated Lead Sulfide Films

of the obtained films indicate that no recrystallization occurs. PbS films stored in air (for 1.5 month) showed after heating again the maximum at 150°C (Fig. 3). The maximum in conductivity at 150°C was also observed with sublimated PbS films (Fig. 2). Thus a strong influence of heat on conductivity is observed in "chemically" (precipitated) PbS films at two temperatures (100 and 150°C) and in "physically" (sublimated) obtained films at a single temperature (150°C). According to the reaction $Pb(OH)_{2\ solid} \rightleftarrows PbO_{solid} + H_2O_{gas}$ (3) the present authors assume that the initial increase in conductivity of PbS films is stipulated by chemically bound and partly by absorbed water. Thus decrease of conductivity by heating the film can be effected by the removal of water molecules and destruction of hydroxyl groupings. The latter could be the source of protolytic conductivity of the amphoteric hydrate of lead oxide. Assuming that the initial rise in conductivity K is directly proportional to the water content n, $K = \beta n$ (4) (β = constant), the rate constant k of water removal from the films can be determined by conductivity measurements in time intervals at constant temperature by stating $k = 2.3/t \log K_o/K_t$, (6) (K_o = initial conductivity; K_t = conductiv-

Concerning the Problem of Low-Temperature Treatment of Chemically Precipitated Lead Sulfide Films

ity after t sec). Conductivity measurements of PbS films (Table 2) were made and the rate constants calculated (Table 3). The rate constant of the monomolecular thermal process occurring in precipitated PbS films is independent of the thickness of the film. The dependence on the temperature can be expressed by: $-\log k = -1{,}610/T - 0.17$ or by $k = 0.68 \exp(-7{,}530/RT)$ (7). The obtained results are in agreement with the assumption that dehydration of PbS films occurs with considerable decrease in conductivity of the film. The authors thank T.M. Zimkina for the samples of sublimated PbS films and electronographic measurements. There are 4 figures, 3 tables and 13 references: 6 Soviet-bloc and 7 non-Soviet-bloc.

SUBMITTED: July 2, 1960

Figure 2: Conductivity curves of lead sulfide films (obtained by precipitation) heated in different gases. A - voltage ~ conductivity (in mv); B - time in min. a - air; b - nitrogen; c - carbon dioxide; d - hydrogen; e - analogous curve for the sublimated PbS film; the figures on the curves indicate the temperature in °C for the adequate time.

Card 5/10

30466
S/054/61/000/004/007/009
B104/B138

24,7300(1153,1160,1454)

AUTHORS: Goryunova, N. A., Orlova, G. M., Zaitsev, A. V., Abramova, A. V., Plechko, R. L., Kozlina, I. I.

TITLE: Some quaternary analogs of germanium

PERIODICAL: Leningradskiy universitet. Vestnik. Seriya fiziki i khimii, no. 4, 1961, 97 - 101

TEXT: Of the possible quaternary analogs of germanium which form tetrahedral phases, only the system ZnSe-GaAs has so far been investigated. The authors chose the system Cu-Ge-As-Se which has a tetrahedral phase of variable composition in the section Cu_2GeSe_3-$GuGe_2As_2$. The presence of this phase was verified and the physical and chemical properties of the phases were studied. 17 alloys from the above section were synthesized by fusion of the components in evacuated quartz ampoules at [illegible]. Microstructure of the alloys was determined by means of an МИМ-7 (MIM-7) microscope and microhardness with a ПМТ-3 (PMT-3) tester. Thermographic analyses were carried out with normal as well as differential recording. X-ray structural analyses showed that the alloys [illegible] from

Card 1/3

Some quaternary analogs of

Cu_2GeSe_3-$CuGe_2As_2$ to

composition

Cu_2GeSe_3-$CuGe_2As_2$

Cu_2GeSe_3 0 4 $CuGe_2As_2$ three

concentration of the composition

structure with lattice constant a =

m:n = 1 6:1 - 4 1:1 have single-phase alloys; m = Cu_2GeSe_3,

n = $CuGe_2Se_3$), m:n =

a = 5.29 ± 0.01 kX; m:n = 5

contained, apart from the common one, another sphalerite phase with

a = 4.41 ± 0.01 kX. The second ZnS-type phase was separated by the

melting of Cu_2GeSe_3-$CuGe_2As_2$ with an optimum rate of

7 - 10 cycles. In the transition from the ternary Cu_2GeSe_3 to the

quaternary As-containing system, from

distorted chalcopyrite lattice is rearranged into the

Lattice parameter and microhardness

The homogeneous region of composition ranges

Card 2/

30866

S/054/61/000/004/007/009
B112/B138

Some quaternary analogs of $Cu_2Ge_6As_4Se_{13}$. These materials might give a new calibration of semiconductor parameters. There are 1 figure, 1 table, and 7 references: 5 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: C. H. L. Goodman. Nature 178, 1213, 1956; J. Phys. and Chem. Solids, 6, 36, 1958.

4

Card 2/2

S/080/62/035/009/009/014
D245/D307

AUTHORS: Danilov, A.V., and Myuller, R.L.

TITLE: Electroconductance of the system $AsSe_{1.5}$-Cu in the vitreous state

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 9, 1962, 2012 - 2016

TEXT: The authors investigated the above problem to obtain an insight into the effects of metallic additions on the electroconductance of glassy semiconductors, as this problem has not as yet been fully resolved. The glasses were prepared from purified Cu B-3 (V-3) Se containing 10^{-4} % Te, 10^{-4} % Al, 10^{-3} % Cl, Br, I, 10^{-3} % As, S and 10^{-3} % P, and As distilled twice in vacuum, to give alloys of general formula $AsSe_{1.5}Cu_x$, by fusion under a pressure of 10^{-2} - 10^{-3} mm Hg, and heating, first moderately and then to 600 - 800°C, with stirring, and cooling at the rate of ~3°C per second. The specific conductance, σ, was measured by the method described by S.A.

Card 1/2

Electroconductance of the system ...

Shchukarev and R.L. Myuller (ZhFKh, 1, 625, 1960), in a range of temperatures, T, finding that log σ increased rapidly with the content of Cu in the glass (which varied between 0 and 19 atom percent) and rose linearly with decreasing 1/T °K. The microhardness of the glasses also increased with increasing copper content. The results are discussed. The conductance modulus maintained its value in agreement with the valency hypothesis of electroconductance and the energy of conductance was found to obey the laws discovered earlier for polar, ion-conducting glasses. There are 2 figures and 1 table.

SUBMITTED: February 6, 1962

Card 2/2

S/058/63/000/003/058/104
A062/A101

AUTHORS: Danilov, A. V., Myuller, R. L.

TITLE: Investigation of the electric conductivity of glass-like semiconductors $AsSe_{1.5}Cu$

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 14, abstract 3E93 (In collection: "Fizika", Leningrad, 1962, 21 - 23)

TEXT: The structure and electrical properties of As-Se-Cu compounds were investigated. It was confirmed that the region of glass formation in these systems is limited. Addition of pure Cu to As and Se favors the formation of glass. This is related with the tendency of Cu to form coordination valent bonds. An atom of Cu may possess a non-coupled electron which may bring about the n-type conductivity. But the same electron can join one of the electrons entering into the neighboring covalent bonds between As and Se and thereby cause an increased hole conductivity. The activation energy of conductivity decreases when introducing Cu into the glass. For the investigated glasses, the conductivity modulus, introduced previously (abstract 3E92), was calculated. In the

Investigation of the...

calculation, the concentration of Cu atoms was used as the concentration of electron pair covalent bonds. The obtained value 4.6±1 is in good agreement with the experiments (4.5±0.1). A conclusion is drawn about the likeness of the mechanisms of the ionic and electronic conductivities of glasses with low mobilities of current carriers.

E. Nagayev

[Abstracter's note: Complete translation]

Card 2/2

Influence of copper and silver on the electrical conductivity and photoconductivity of vitreous chalcogenides of antimony.
A. V. Danilov. (Presented by R. L. Myuller--20 minutes).

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

L 10768-63 EWT(1)/EWD(k)/EWP(q)/EWT(m)/
BDS/EEC(b)-2--AFFTC/ASD/ESD-3--Pz-4/Pq-4--AT/WH/LJP(C)/JD
ACCESSION NR: AP3003906 S/0181/63/005/007/2015/2016

AUTHOR: Danilov, A. V.; El' Mosli, M.

TITLE: Effect of copper and silver on the photoelectric properties of glassy As_2Se_3

SOURCE: Fizika tverdogo tela, v. 5, no. 7, 1963, 2015-2016

TOPIC TAGS: As_2Se_3, glass, doping, Cu, Ag, intrinsic photoeffect, conductivity, photoconductivity, solubility, inertia of photoeffect

ABSTRACT: Study of the spectral distribution of the intrinsic photoeffect and the conductivity of As_2Se_3 glass doped with Cu and Ag showed that increase of the impurity content displaces the maximum and the red end of photoconductivity toward the long-wave region of the spectrum. Cu reduces the forbidden energy gap to a higher degree than Ag. The solubility of Cu in As_2Se_3 is three times that of Ag. The abnormally high solubility of Cu is apparently due to the closeness of the effective radii of Cu, As, and Se and to the higher capacity of Cu to form coordination-valence bonds, which hinder the crystallization of the glass. The photoeffect in glasses containing Ag has a low inertia; illumination

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L 10768-63

ACCESSION NR: AP3003906

2

of specimens with intermittent light showed that the photocurrent rise and decay times do not exceed 10^{-3} sec. Photocurrent rise and decay times in glasses containing Cu depends on the amount of impurity introduced. "In conclusion, the authors express their deep gratitude to junior scientific worker B. V. Novinov for his continuous assistance during the course of this study." Orig. art. has: 2 figures.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet (Leningrad State University)

SUBMITTED: 01Mar63 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: 00 NO REF SOV: 006 OTHER: 002

Card 2/2

L 14483-65 EWT(1)/EWP(e)/EPA(s)-2/EWT(m)/EWP(b) Pq-4/Pt-10/Pi-4 ASD(a)-5/
AFWL/AFETR/ESD(gs)/ESD(t) WH

ACCESSION NR: AP4038565 S/0080/64/037/005/1122/1125

AUTHOR: Danilov, A. V.

TITLE: The electric conductivity of copper-containing chalcogenide glasses

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 4, 1964, 1122-1125

TOPIC TAGS: electric conductivity, copper containing glass, chalcogenide glass, selenotelluride glass, sulfoselenide glass, ionization center, vitreous semiconductor, valency theory, conductance energy, admittance, steric factor, density, microhardness, annealed glass, crystallization

ABSTRACT: The electric conductivity of copper-containing glasses of complex composition $Cu_xAsSe_{1.5}$, where x = 0.04, 0.08 and 0.16, and where Se may be partially replaced by S or Te (0.5, 0.75, or 1.0), was determined, and data was evaluated. The glasses were synthesized and the conductance measured as in the previous work (A. V. Danilov i R. L. Myuller, ZhPKh, XXXV, 2012, 1962). The temperature-conductivity relationship of the various compositions was summarized graphically.

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L 14483-65
ACCESSION NR: AP4038565

The method of synthesis did not affect the conductivity. Prolonged annealing at temperatures near the softening temperature of the copper-containing glasses did not affect the electric conductivity. Values of the density, microhardness, concentration of As and of valence bonds, the conductivity, the energy of conductance, the admittance, and the steric factor for the various glasses were tabulated. The conductivity and the tendency toward crystallization increased as the amount of copper in the glasses increased; the glass-forming ability decreased as the Se content was reduced. A small amount of Cu (0.04) lowered the conductance energy of the sulfoselenide glass but caused little change in the selenotelluride glass. It was indicated the number of ionization centers in the former corresponds to the number of copper atoms in the glass, while in the selenotelluride glass the ionization centers are the predominant (-Te-) bonds. Larger additions of copper lowered the E_G for both groups of glasses. The relationships observed in analyzing the experimental data obtained with these vitreous semiconductors were explained from the viewpoint of the valency theory of conductance. "In conclusion I take the opportunity to thank R. L. Myuller for directing the work and for valuable remarks in discussing the experimental results." Orig. art. has

Card 2/3

L 11483-65
ACCESSION NR: AP4038565

1 table and 1 figure.

ASSOCIATION: none

SUBMITTED: 01Mar63 ENCL: 00

SUB CODE: MT, EM NO REF SOV: 006 OTHER: 001

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00110

DANILOV, A.V.

Electric conductivity of copper-containing chalcogenide glasses. Zhur.prikl. khim. 37 no. 5:1122-1125 My '64. (MIRA 17:7)

MAKASHEVA, V.D.; ANDREYEV, S.A.; DANILOV, A.Ya.; UGAROV, F.P.; PAK, F.F.; PODKOPAYEV, I.I.

Fortieth anniversary of the Great October Revolution. Khleb. i kond. prom. 1 no.9:31-36 S '57. (MIRA 10:11)

1. Mytishchinskiy khlebokombinat Moskovskogo oblastnogo tresta khlebopecheniya (for Makasheva, Andreyev, Danilov). 2. Klinskiy khlebokombinat Moskovskogo oblastnogo tresta khlebopecheniya (for Ugarov). 3. Podol'skiy khlebokombinat Moskovskogo oblastnogo tresta khlebopecheniya (for Pak, Podkopayev).
(Bakers and bakeries)

DANILOVA, G.V.; LOYTER, M.N.; ALEKSEYEV, N.A.; KOVALEV, I.I.; DANILOV, A.Ye.; SHENDRIKOV, G.L., i.o. glavnogo metodista; ORLOVA, V.P., redaktor; PAVLOVA, M.M., tekhnicheskiy redaktor

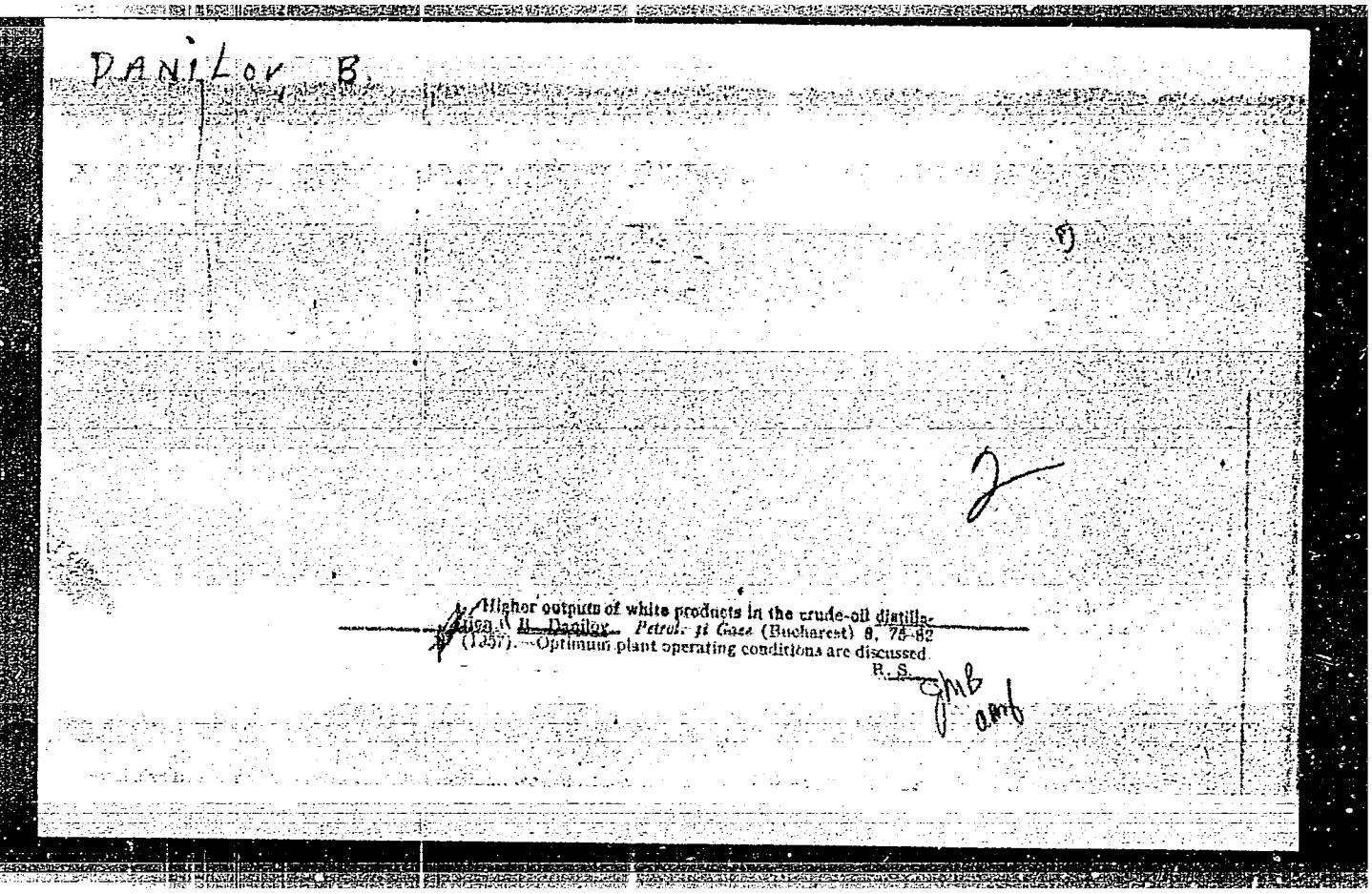
["Water resources management and rural hydroelectric power stations" pavilion; a guidebook] Pavil'on "Vodnoe khoziaistvo i sel'skie gidroelektrostantsii"; putevoditel'. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 21 p. (MLRA 9:12)

1. Moscow. Vsesoyuznaya sel'skokhozyaystvennaya vystavka, 1954-
2. Direktor pavil'ona (for Danilova)
(Moscow--Agricultural exhibitions)
(Water supply, Rural)
(Hydroelectric power stations)

[illegible]

[illegible] Economy of fuel in petroleum refineries. [illegible].
Vol. [illegible], no. [illegible], Sept. 1955. Editura Tehnică, Bucureşti.

Source: East European Accession List (EEAL), Library of Congress, Vol. [illegible], No. [illegible], Feb. 1956



DANILOV B.

9

2

Higher outputs of white products in the crude-oil distilla-
tion. I. Danilov. *Petrol. şi Gaze* (Bucharest) 8, 75-82
(1957). Optimum plant operating conditions are discussed.
R. S.

P/007/61/012/001/002/003
A231/A126

11.1210 26089

AUTHOR: Danilov, B., Engineer

TITLE: Extraction of some Rumanian diesel oils by furfural

PERIODICAL: Petrol şi Gaze, v. 12, no. 1, 1961, 27 - 33

TEXT: The article deals with the problem of improving the cetane number of some Rumanian diesel oils by extraction with selective solvents, since this method presents practical importance. Liquid fuels of internal combustion engines are a complex of hydrocarbons, producing heat, which is transformed by the engine into mechanical energy. The burning is expressed by a rapid reaction between a fuel and a substance promoting combustion, followed by a heat emission and the appearance of the flame. The burning process also includes the oxidation reaction, which is produced at a lower or higher speed, with or without appearance of the flame. The heat produced at the burning is distributed as follows: 1) one part increases the temperature of the system; 2) a second part activates some particles which accelerate the reaction; and 3) the last part is lost by conductibility and radiation. The oxidation of hydrocarbons is a chain reaction; it takes place by the action of the activated particles. Several theories have been established for

Card 1/4